2003 Annual Report
Brule River State Forest

Vision Statement from 2002 Masterplan

The Brule River State Forest provides for the sustainability of a unique river system and biologically rich forest community. The Forest's natural resources are managed, protected and restored to promote ecological health and natural communities, to complement the larger ecosystem, and to recognize cultural and economic values. The state forest accommodates recreational activities consistent with the natural quality and scenic settings found along the Bois Brule River. The Department of Natural Resources works with federal, state, tribal and local governments, neighboring industrial and private forest owners, and citizens who enjoy and subsist on the resources of the Brule River State Forest.

The Year in Review

2003 was a good year for the Brule River State Forest. We began implementing the 2002 masterplan and made some noticeable accomplishments in terms of resource and property management. The year 2003 had no destructive windstorms, no hail, no floods, and no catastrophic fires occur on the state forest. That alone made 2003 notable, considering the events of the previous years.

The biggest event in the Brule River State Forest in 2003 was probably the reconstruction of Highway 2. All summer the highway was ripped up and the right-of-way was significantly altered. The feeling when someone arrives in the Brule Valley along highway 2 will never be the same. Together with the Tri-County Corridor Commission, the Brule River Riders snowmobile club, and the Brule River Sportsman's Club the Brule River State Forest worked with the Department of Transportation to encourage modification of highway plans and some positive changes were made. During the spring of 2004 several thousand trees will be planted in the right-of-way between the trail and the highway.

The landing host program, intended to contact people before they start a trip down the river, was a big success in 2003. Naturalist Josh McIntyre worked closely with the canoe rental company to spread the word about rules regarding the Brule River. Landowners along the river have shared their appreciation for the program and feel that it is making a difference in user behavior.

The Rangers, Kevin Feind, Gerry Danielson, and Ed Culhane, performed enforcement patrols on the state forest. Their increased presence is anticipated to make an impact on illegal activity. Citations were up in 2003 and one major criminal case was investigated and resolved.

Forester Dave Schulz and technician Kurt Janko, with help from Josh McIntyre committed significant time to performing reconnaissance, a process to document the trees and other plants on the state forest and update the electronic database on forest stands. Timber sales were set up to thin red pine plantations, regenerate jack pine, and salvage oak.

The 2002-3 ski season at the Afterhours Ski Trail was a mixed bag. Low snow caused the cancellation of the candlelight ski event. Enough snow was available to permit the first "Timber Cruise" ski race and the "Riverview Loppet" ski race. For 2003-4 the ski trail had plenty of snow and the new (to the forest) Tucker Sno-Cat with the big Yellowstone Ginzu-Groomer behind proved its worth, providing high quality grooming, quickly, and comfortably.

2003 will be remembered as the "year of the tours". In May the Institute for Journalism and Natural Resources, with journalists from across North America, toured the property and planned a canoe trip but heavy rains changed those plans. In June the Forest Resource Program Leaders group held their annual conference in Superior and paddled the Brule one afternoon. These were the state foresters or equivalent staff from the northeastern 20 states as well as US Forest Service staff that oversee the private forestry program. In July the International Conference of Conservation Biologists met in Duluth and offered a Brule River tour. This group included conservation biologists from around the world including South Africa and the mid-east.

Camping numbers for the state forests campgrounds were down, probably due to reducing the number of available sites and the lack of signs on US 2 because of the construction.

The accomplishments of 2003 and the plans for 2004 are shared in the articles on the following pages. Please feel free to share your thoughts on management plans with the forest staff by May 17, 2004.

From left to right: Dave Schulz, Steve Petersen, Kevin Feind, Kurt Janko, Josh McIntyre, Kathy Khalar, Ed Culhane

Wildlife Management Activities

2003 Work Accomplishments

Surveys:

Sharp-tailed grouse surveys showed continued use of the dancing ground near Clevedon Road, with 3 dancing males observed in 2003. Sharptails have also been observed near the Motts Ravine Natural Area and the hail damage area, but no dancing grounds have been found…yet.

A shore bird survey was completed in cooperation with Great Lakes Marsh Monitoring Program. The frog survey was not completed due to lack of time on behalf of the volunteer.

A predator track survey was completed with average number of fisher, coyotes and fox found this winter.

There are currently 4 known wolf packs that use portions of the BRSF, these are Orienta (4 wolves), Casey Creek (4 wolves), Moreland Lake (5 wolves), and Shoberg Lake (3 wolves). Wolf surveys included trapping and collaring of a young adult female in both the Moreland Lake pack. She was killed by other wolves when she apparently trespassed in the adjacent Rainbow Lakes territory. This wolf appeared to have mange and weighed 68-lbs when captured in late June and had nearly fully recovered from the mange and weighed over 90-lbs at the time of her death.

Deer surveys included typical collection of winter severity data, summer doe-fawn observations, deer registration, and aging. Population estimates indicate that deer herd in management units 2 and 9, which cover the entire BRSF, are rising after the light harvest of 2002 and mild winter of 2003 and were designated as a T-zone for 2004. This will provide hunters with a free antlerless only permit and an extra opportunity to harvest antlerless deer in October.

Grasslands:

Two prescribed burns were completed, north portion of the Goose Refuge (34 acres) and Cloverland Community Club (38 acres). Mowing was completed on Fasteland Fields (7 acres), Leppala (18 acres) and Koski (10acres) as planned. The perimeter of the area to be burned in 2004, the south end of the Goose Refuge, was mowed to facilitate easier fireline preparation.

Openings:

As a result of the new master plan, 60 openings totally 236.5 acres will no longer be maintained. An evaluation of these openings was done to identify those that will likely succeed naturally to white pine, spruce or birch and to identify those that will require seeding and/or planting to establish native tree species.

Twenty-four openings were mowed with an ASV (all-surface vehicle) for the first time. The ASV has a rubber track system that has a ground pressure less than an adult person and provided access to areas that previously required hand-cutting or herbicide to maintain them. Preliminary use of the new equipment shows promise of nearly eliminating the need to use herbicides or hand-cutting in the future.

Wetlands:

Dike maintenance was performed at the Goose Refuge and Cloverland Community Club ponds. Maintenance consisted of compacting muskrat burrows with a rammer and leveling with topsoil. Dikes are mowed whenever we are in the vicinity with proper equipment.

2004 Work Plan

Surveys:

Surveys for predators, sharp-tailed grouse, frogs and marsh birds, deer, and wolf surveys will continue. Collaring of additional wolves is dependent on further funding of this program.

Grasslands:

One prescribed burn that was planned for 2004 was completed last week. The southern portion of the Goose Refuge (59 acres) was burned on April 6. Hand cutting or mowing may begin on the former FmHA property on the west side of Clevedon Road that lies within the waterfowl refuge.

Openings:

An ASV will be rented again this year to mow 24-26 openings within the habitat management area.

Wetlands:

Dike maintenance consisting of filling muskrat burrows and mowing will continue as time and funding permits.

Maintenance and Development

Maintenance and development projects provided some notable accomplishments in 2003. Several projects were completed and funding for a couple more projects was received.

Major improvements were accomplished to the water supplies at the highway 2 canoe landing, the St. Croix picnic area, and the headquarters well. At highway 2 the artesian flow had reduced to the point it was no longer adequate so a handpump was installed. Eventually this arrangement may be adjusted but for now the well is functional and drinking water is available there. At the headquarters a new overflow was installed. At St. Croix the non-functioning drinking fountain was removed, the drain pipe repaired, and a new overflow pipe for the artesian well was installed. Plans are for a rock enclosure to be laid around the well here to give it a rustic look.

Driving into the forest headquarters has a different feel now. Both the office and shop were painted in the fall. The office is dark brown with dark green trim and the shop is an interesting mix of greens. Anyone that has ever bought paint will understand how hard it is to visualize a 120 foot long building's true color from that tiny little chip of paint… But the office looks real nice.

Work was started on the project to restore the shoreline at the Bois Brule Picnic Area. A split rail fence has been installed to keep people from climbing on the bank. Hundreds of trees were planted between the river and the campground and blackberry bushes were also planted near the fence. Other work to be done in the spring of 2004 includes additional planting, riprap of the worst erosion, and construction of a canoe landing similar to the one at Pine Tree. Erosion control fiber logs will be staked along the shoreline to protect the bank.

Campsites were removed from both campgrounds and a new numbering system was installed. One of the riverside sites in Bois Brule, as well as two other sites that were poorly positioned were obliterated. At Copper Range the last two sites on the left side of the road were eliminated and the refuse/recycling station was positioned at the location of the last site. Round wooden campsite marker posts were installed with new registration card holders and routed numbers. Some of the informational signs in the campgrounds were also replaced with routed wooden signs.

Shannon Gallagher completed his Eagle Scout requirements by building a trail from the Old Bayfield Road towards the Copper Range Campground. He supervised a crew of scouts and they built trail tread, boardwalk, and a small footbridge. Another Eagle Scout candidate, Willy Grapentine, will continue the trail construction this year. Soon hikers will be able to get to the Old Bayfield Road Hiking Trail from the campground on a marked, dedicated hiking trail. The efforts of these scouts are truly appreciated.

Following the reconstruction of Stones Bridge in 2002 the parking lot at that canoe landing was sealcoated and re-striped to improve the flow of traffic. The parking lot at St. Croix Picnic Area was crack-sealed and re-striped as well.

Hunter walking trails were mowed; some for the first time in a long time due to the dry conditions. The Wildlife program rented a Positrak ASV mower and the state forest contributed to use it for a couple weeks. A new system of hunter walking trails was opened up near highway 13 and Loveland Rd. The ASV mower was used to create access to trails that had not previously had public access.

The ASV mower was also used to develop a "classic only" ski trail at the Afterhours trails. This 2 mile trail is only about 7 feet wide and winds between the trees, providing an experience that had been requested frequently by skiers.

Construction of a snowmobile bridge was completed near highway 27 and 2. This trail gets snowmobiles off the shoulder of highway 27 yet keeps the snowmobile traffic in the two of Brule. The project was featured in the magazine of the Association of Wisconsin Snowmobile Clubs.

Other minor maintenance accomplishments for 2003 include:

- An additional length of pier installed at St. Croix to improve access
- Restrooms and the bulletin board at St. Croix were stained
- Ski trails were leveled
- New electric service was installed into the ski hut and a streetlight was installed.
- Guardrails were placed at the Co-op Park Bridge in cooperation with the Town of Brule.

Plans for 2004 construction season include:

- Resurfacing parts of the Old Bayfield Trail with gravel, boardwalk, or wood chips
- Construction of a new canoe landing at highway 2 to reduce erosion into the river.
- Construction of an improved trail tread to Mays Ledges. Temporary work done in 2001 was beneficial and this will make it more permanent.
- Gravel will be placed on a number of angler parking lots and culverts will be replaced where necessary.
- A major painting/staining effort will be made. Dark brown will be the color of choice.
- Construction of a storage shed for the ski trail
- If time permits, a warming shelter may be started on the ski trail.
- Portions of the ski trail will be flattened out and widened where needed.

- Construction of a boardwalk to the landing at Stone Chimney Road.
- Campsite reconstruction for accommodating campground hosts.
- Sign replacement
- Vegetative maintenance on the area just north of Minnesuing Field will continue. In the future this area will be periodically burned.
- Development of the snowmobile trail overlook

The snowmobile bridge near Brule being assembled

400th State Natural Area

State and regional officials and the public celebrated the designation of Wisconsin's 400th State Natural Area on Monday June 9, 2003 at the Brule River State Forest with the designation of Mott's Ravine.

Mott's Ravine is a 600-acre area that contains patches of natural jack pine forest, scrubby Hill's oak and bur oak thickets and small pine barrens remnants. The site will be actively managed with a combination of prescribed fire and some timber harvest to maintain patches of young pine barrens, 20 to 60 year old jack pine/scrub oak forest and old (greater than 100 years) xeric forest.

Mott's Ravine was given recognition and management direction in the recently approved Brule River State Forest Master Plan. The State Forest also continued a long-standing partnership with the Wisconsin State Natural Areas(SNA) Program by recognizing nearly 4,000 acres of the state forest as state Natural Areas.

Wisconsin's SNA Program is the oldest natural areas program in the nation beginning in 1951. Since that time more than 150,000 acres have been protected. A natural area is an example of an outstanding natural biotic community

Chris Sutherland poses with the sign he routed and painted

THE NORTH COUNTRY TRAIL

The North Country National Scenic Trail (NCT) was established by Congress to be administered under the guidance of the National Park Service and manned by a volunteer organization, the North Country Trail Association (NCTA). The North Country Trail is a single track trail designated for foot traffic only, running from New York to North Dakota. The Brule St Croix Chapter of the NCTA is the local entity responsible for construction and maintenance of the NCT from the Chequamegon National Forest to the Minnesota border.

To date, the trail has been constructed as far west as the Solon Springs area. We are fortunate to have the cooperation of the Brule River State Forest and be able to build the trail on some of the most scenic terrain and forest in the area. Trail in the Forest has been blazed with blue paint and some signs have been erected to provide direction and information for hikers. The BRSF has cooperated in building a trailhead where the trail crosses Hwy 27 and another trail parking area is to be constructed adjacent to Samples Road in 2004. Informational kiosks will be installed by the NCTA at Samples Road and at the St. Croix Lake Picnic Area and Boat Landing. Footbridges will be built across Jersett Creek and St. Croix Creek with trail association funding. Plans are to begin construction of puncheon (boardwalk) across approximately ½ mile of the Brule Bog within BRSF.

Ski Grooming Workshop

In February 2003 the Brule River State forest hosted nearly 30 cross country ski trail groomers from Wisconsin state forests and parks and county forests. They had a classroom session with presentations by Eric Anderson of ABR Ski Area, Paul Sandgren from the Southern Unit of the Kettle Moraine State Forest, and Karl Heil from Blue Mound State Fark, as well as Kevin Feind, from the Brule River State Forest. Charlie Zinsmaster, Iron County Forest Administrator shared his experiences grooming for the Olympics at Soldier Hollow Ski Area. The next day people had the opportunity to try the various pieces of grooming equipment used at the Afterhours Ski Trail.

Forest Management

A bid opening was held in March on 6 tracts of timber totaling 4,330 cords on 289 acres. All sales were sold for a total of $237,000 in stumpage values.

Planting was completed on 240 acres of land in the Stone Chimney area that was harvested due to the hail storm of 2000. In addition, approximately 25 acres of land that had poor survival from the previous years planting was replanted. In all, 217,000 trees were planted this spring. This included 120M red pine, 65M jack pine, 30M white pine, and 2M white spruce. Our planting crew was here for about 5 days and planted through some very tough conditions, including 35 degree rain.

The spring of 2003 was a fairly active one for fires in the Brule area. Much staff time was taken up in fire control activities. Fortunately, only one very small fire was reported within state property and there was no damage. Several prescribed burns were completed; most notably Motts Ravine State Natural Area was burned for the second time.

With the completion of the master plan comes some management practices that require extensive monitoring to determine the effectiveness of the practice. Monitoring was started on the clay plain forest to document species composition of the understory plant community within our aspen stands. This is done in cooperation with Colleen Matula (Northern Region DNR Forest Ecologist) and Karen Danielson (GLIFWC Forest Ecologist). Plots were established within several different aspen stands to document understory plants. This involved identifying species of all plants found, as well as documenting forest stand conditions.

Several areas of oak mortality were located and assessed for potential timber sales. The oak mortality was caused by 2 successive years of severe defoliation by the forest tent caterpillar which was followed by the Two Lined Chestnut Borer. Potential oak salvage timber sales were set up in 2 areas totaling 114 acres.

During the fall field work was completed on 4 timber sale areas totaling 4,825 cords located on 283 acres. Bids were received on these sales and the tracts were sold for over $251,000 in combined stumpage values.

Several sales had active harvesting over the fall months. A segment of “Into the Outdoors” a WDNR sponsored TV show was filmed on one of the sales. This segment followed a red pine tree that was harvested in our forest to a log home manufacturing facility.

Preparations for spring tree planting began with survival counts being completed on the areas that were planted in 2002. Replanting is needed on 237 acres. This will be completed in the spring of 2004, along with 200 acres of new tree planting. Plans are to plant 291,000 trees in the spring on these acres. Site preparation treatments (disk trenching) were completed in November on the 200 acres that will be newly planted in the spring. Including this acreage, the replanting acreage will total 723 acres over a 3 year period.

Over the winter work was begun on updating forest compartment reconnaissance north of Hwy 13. Field work is now 75% complete on this project. Red pine thinnings were set up in 2 areas totaling 159 acres. These will be offered for sale with our next bid opening. Plans for future timber management activities were made and are attached to this report.

The state capitol holiday tree for 2004 will be cut from the Brule River State Forest. Plans are being developed with the Wisconsin Professional Loggers Association and the state capitol facilities management staff to cut the 45 foot balsam from near the ski trail.

Forestry Centennial

Wisconsin's state forestry program is celebrating its centennial in 2004 as marked by the hiring of the first State Forester in 1904. When E.M. Griffith started his new job on February 1, 1904, fires raged out of control on the cutover forest land of Wisconsin's Northwoods. Griffith's first projects were to establish an effective fire control program, build a nursery to produce tree seedlings and then begin the task of reforesting Wisconsin. 100 years later, we can look out over our forests and celebrate all of the partners and programs that have made us successful.

The purpose of our centennial celebration, titled “2004: Year of Wisconsin Forestry,” is to promote a broader understanding of the role forests play in our lives, the many aspects of sustainable forest management and the successful recovery of Wisconsin’s forest resource over the past 100 years. In addition to celebrating the history and advancements made in the field of forestry, goals for observing the “Year of Wisconsin Forestry” include raising the public’s understanding of the forest resource, the benefits it provides and their dependence on the forest in their daily lives.

Not only is the Division of Forestry celebrating this event, but other forestry partners around the state such as the Wisconsin Society of American Forester’s-85 years, Wisconsin County Forests-75 years, Trees for Tomorrow-60 years, and Wisconsin Woodland Owners Association-25 years to list a few. Special events are planned throughout the year to celebrate. As part of the Forestry Centennial the Brule river State Forest will be hosting a series of tours on the property.

- Glacial Features Auto Tour - May 15
- State Natural Area Tour – June 19
- Stones Bridge to Winneboujou - July
- Portage Trail – August 14

Other planned centennial activities on the Brule River State Forest include new interpretive panels on the Stony Hill Nature Trail and reconstruction of an early logging sled for display near the office. The sled would be loaded with logs from each state forest and stamped with a property distinctive log mark.

View of the Brule Valley from the North Country Trail

Brule River State Forest Hail Damage Monitoring Project 2003 Summary

Background:

In response to the summer 2000 hail storm on the Brule River State Forest, a monitoring project was established in the affected area in 2002. This large disturbance event presents an opportunity to examine how this forest system responds and recovers from a sudden catastrophic change. The purpose of this study was to determine tree survival and stem growth after injury and the overall landscape response following the summer 2000 hail storm. The following is a brief description of the inventory; a summary of results from the 2003 inventory and discussion; and needs for further monitoring.

Tree Health and Growth Measurements

In 2002, a total of 33 plots were established in a variety of covertypes: 21 in the damaged area and 12 in the control areas. The covertypes selected were red pine, swamp conifer, aspen (mature and young). Eight trees from each plot were selected to monitor over the next few years. A total of 168 trees in the damaged area and 96 trees in the control are monitored. The tree species include red pine, cedar, white birch, balsam fir, black spruce, and quaking and big tooth aspen. Regeneration plots in young, damaged aspen were also conducted. A variety of tree measurements were taken including DBH, total height, crown ratio, crown dieback and crown density. Crown assessments are good measures of overall tree health. The definition of crown dieback and density are as follows:

Crown Dieback - recent mortality of branches and twigs beginning at the terminal portion proceeding toward the trunk.

Crown Density-amount of tree branches and foliage blocking light visibility through the crown.

Summary

The following bullets summarize the data gathered from both control and affected plots in 2003.

Damaged

- Most (95%) of the red pine sample trees had 10% or less crown dieback, however, crown density figures of 30-50% were documented in over half of the samples and the rest >50% density.
- About 68% of the mature aspen sample trees had 10-30% crown dieback with the rest <10% dieback. About 57% of the trees had a crown density of 30-50% with the rest having >50% density.
- About 50% of the sample black spruce trees showed 20-30% dieback and the others <10%. About one third of the sample had a crown density of 30-50%, another third >50% and the last third were dead (0% density).
- The swamp covertype showed severe signs of distress with several trees on the plot that died within the last year.
- Aspen saplings showed signs of medium vigor and over 75% of the sample trees with crown density of 5-30%.

Control

- Most aspen, red pine, and black spruce sample trees have a crown density of >50%.
- Most aspen, red pine, and black spruce sample trees have crown dieback of <10%.

As with last year's data, this year's sampling shows trends in survival rates within each covertype and size/age class of trees. The control plots are the baseline used for comparison. Overall, the affected sample plots showed more sign of crown dieback and lower crown density when compared to the control plots.

Survival rate of swamp conifer covertype is extremely low within the last year. Many trees within the established plots were dead. Crown dieback was initially present after the hailstorm. Currently the swamp tree species are struggling to maintain the crown density.

Survival rate of mature aspen is good. The crowns are recovering. However, some aspen trees that were predisposed of insect/disease damage are displaying poor health. The damaged, sapling aspen are struggling with medium vigor and less crown density. These trees will display a growth reduction due to qualities in restoring the crown that was lost in the hailstorm.

Both pole and sawtimber-sized red pine are adequately recovering. The crowns are filling in and the tops are overcoming the leader that was damaged in the hailstorm.

Future

The 2004 field season is the last year for the hail damage study. This field season will focus on obtaining increment cores and some remaining tree measurements. The effects of crown loss on radial growth will be determined. A final summary and report will be written In the next few years documenting regeneration and long-term response to the hail damage is recommended. The USDA-FS publication RP NE-723 documents a similar ice storm that occurred in New York and Quebec in 1998. The document outlines similar methods of monitoring as this study. The paper concludes with the statement that if trees are healthy and responsive before the storm, they are more likely to survive and recover from injury. Prudent measures to enhance tree health are necessary in weathering an event such as this.

Breeding Bird Count

In mid May-June breeding bird counts were conducted. There were 4 transects established: 1 control and 3 in the damaged area. Each transect had approximately 25 plots that were at least ¼ mile apart for a total of 100 plots. There were a variety of habitats in each transect including red and white pine, northern hardwood, aspen, swamp conifer, open field, shrub wetland, bog and cattail marsh. The following is the result of the 2003 bird inventory.

Damaged

- 77 bird species documented (opposed to 73 in 2002)
- Overall, lower number of individuals especially in the following species: ovenbird, red eyed vireo, mourning warbler, and chestnut-sided warbler.
- As with last year, more edge, shrub and field bird specialist are present.
- Trumpeter swan, northern oriole, and Lincoln sparrow documented.

Control

- 43 species documented (opposed to 39 in 2002).
- Lower number of individuals.
- A mix of forest and shrub specialist's documented.
- LeConte's sparrow documented.

Discussion/Needs

In comparison to 2002, the overall number of individuals was lower. Possible reasons could be West Nile virus or other debilitating disease. The yellow and black-billed cuckoo populations have dispersed due to decrease in tent caterpillar outbreak.

One more field inventory will complete this study.

Participants in the 2003 Family Fun Day

Hatchery

The Brule River Trout Rearing Station was built in 1927. The water supply for the rearing station is the entire flow of the Little Brule River. We receive 2400 gpm of water flow throughout the facility. We raise three domestic and two feral species of trout at Brule. St. Croix brook and brown trout, Erwin rainbow trout, Seeforellen brown trout and Timber Coulee brown trout. All domestic fish are transferred in as small fingerlings in early June from the St. Croix Falls and Osceola State Fish Hatcheries. The Seeforellen brown trout arrive in early July from the Bayfield State Fish Hatchery and the Timber Coulee brown trout will be transferred in July. We stock lakes, rivers and streams in 11 counties in northern Wisconsin and also parts of Lake Superior and Lake Michigan (Figure 1). In 2003-2004 we stocked, 25,000 Brook trout, 191,500 Brown trout and 44,000 Seeforellen brown trout. In 2004-2005, we will stock 25,000 Brook trout, 197,000 Brown trout, 54,000 Seeforellen brown trout, 4,000 Timber Coulee brown trout and 20,000 Rainbow trout.

On June 7, 2003, the Brule Fish Hatchery and Brule River State Forest held a Family Fun Day. Activities included, hatchery tours, fly tying, fly casting, fish printing, electrofishing demonstration, canoe trips on the Brule River, and a nature hike. It was a big success with about 90 - 100 people in attendance. We were assisted by members of Trout Unlimited, and the Brule River Sportsman's Club (Figure 2).

Over the last several years the nature center in the old hatchery office was a big hit with tourists. We had over 1200 visitors from 24 states and four countries sign our guest book from July 2002 to June 2003. Many tourists visit our facility after hours during the summer. These visitors are not signed in the guest book and therefore are not counted.

Law Enforcement

2003 was the second year of having three Rangers for the summer. Ed Culhane was hired to patrol the river from steelhead opener to deer season. Gerry Danielson focused his patrol efforts on the campgrounds from Memorial Day to Labor Day and Kevin Feind worked property-wide. Combined with the assistance from naturalist Josh McIntyre at the canoe landings there was a high level of presence on the river and at the use areas. For the year there was an increase in citations and several criminal arrests.

During early 2003 Ranger Feind started training to be a firearms training instructor for the forests and parks in northern Wisconsin. He continued this training through the spring and fall and is certified to instruct for pistols and shotguns. Kevin is one of four instructors providing training to approximately 50 officers.

Snow conditions in early January were very poor and snowmobiling season was only about three weeks long. Little enforcement effort was made on snowmobiling. ATVs were more common on the snowmobile trail, which is legal only when the trail is open for snowmobiling.

Ranger Culhane started working for the season with the steelhead opener. He worked fulltime on fishing enforcement and discovered few violations.

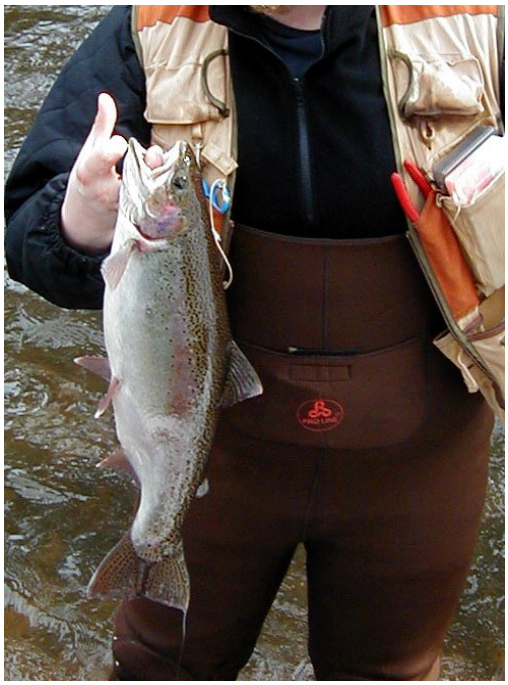
The road construction along highway 2 required removal of the signs for the campgrounds. Three campsites in Bois Brule and two sites in Copper Range were removed. Camping attendance was down from 2002.

The most interesting case for 2003 developed around the fourth of July. It was discovered that self-registration envelopes were being removed from the registration stations at the campgrounds. One of the surveillance cameras was set up and within a few days a perfect image of a person stealing envelopes was on tape. The tape was shared with the Ashland Police Department and identification was made. The person was arrested in the Copper Range Campground and is now in prison. During the arrest a stolen portable

police radio from a nearby jurisdiction was recovered. The use of surveillance equipment was invaluable and really was the key to making this case.

Another notable arrest for 2003 involved a driver operating without a license. As a fourth offense, this was a crime.

A passive infrared trail counter was placed at a discreet location on the upper river to count watercraft. It was in place from Memorial Day to mid-September. During that time 7,392 watercraft were counted, an estimated 14,784 people. Historically it was considered that half that many people made the trip between highway B and 2. It is estimated that the same number makes the B to 2 trip as the trip from Pine Tree Landing to 13. This comes to an estimated 29,600 people canoeing on the Brule River during 2003. On August weekends 77% of the canoes launched at Stones Bridge were rented from Brule River Canoe Rental.



Fall was dry and made for poor bear hunting conditions with dogs. Ruffed grouse numbers were low. River levels were low and made for difficult fishing but there was still normal numbers of anglers.

A continual problem on the forest is permanent tree stands. During the fall there was a lot of effort spent on finding and removing tree stands and follow-up enforcement. These stands harm trees, "stake claim" on public land, are litter, and contribute to additional illegal activity like afterhours hunting.

For 2004 an emphasis will be made on loose litter and glass container violations in canoes. After two years of increased education about the rules it is felt that the time is right to lower the tolerance threshold. Hunting, fishing, and ATVs will also be watched closely.

Masterplan Update

In the fall of 2003 the Brule River State Forest requested a masterplan variance to salvage oaks killed by two-lined chestnut borer. The DNR continues to examine the variance request and will make a final determination in the near future.

Following the approval of the masterplan a public request was made to clarify a few points. An expanded public communication plan was developed and clarification was made to the description of the boundary of Area 4. Additionally, a narrative description of the process used to develop a timber sale was developed.

Public communication Plan

The State Forest Superintendent will be the Department representative responsible for communicating the goals and management of BRSF as well as answering questions from the public regarding land management, recreation and law enforcement. The property manager will maintain a mailing list of persons or groups interested in receiving information about important management issues on the property. Mailings and news releases may be used to notify the public of significant developments on the property.

The Department will hold semi-annual meetings to discuss land management, recreation and law enforcement on the state forest, and explore possible options for cooperative projects. A spring meeting will be held the first Saturday after April 15 and a fall meeting the Saturday of Labor Day weekend. The spring meeting will focus on proposed timber sales to be let out for bid the following fall and the next spring. The fall meeting will focus on recreation and law enforcement activities conducted the previous summer and proposed for the next year. Both meetings will explore options for cooperative projects and other subjects of interest concerning management of the Brule River State Forest.

Approximately 30 calendar days—but no fewer than 21 calendar days—prior to each semi-annual meeting, the Department will post on the DNR Website for BRSF Master Planning (http://www.dnr.state.wi.us/master_planning/brule/) notice of the meeting and a draft agenda outlining proposed land management, recreation and law enforcement activities to be discussed at the upcoming meeting, as well as an explanation of any possible changes in planned management activities resulting from adaptive management. The website will also include a report of timber harvesting activity by area, to include: (1) the acreage and status of all harvesting activity including a reference to the legal descriptions of specific areas in which a harvest is planned, to be posted on or before the date the meeting notice and agenda are posted; (2) the cumulative total acreage established for sale for the plan period; and (3) the management objective that relates the activity to the BRSF Master Plan. During the meetings, specific timber harvest information by timber type will be available and Department staff will allow a reasonable time for discussion of additional BRSF related issues that members of the public ask to discuss.

For 30 calendar days following each semi-annual meeting, the Department will welcome and consider comments on any agenda items discussed at the most recent

meeting. Due to workload constraints, the Department will likely not issue written responses to individual comments after the 30-day comment period has elapsed. However, the Department will update the BRSF Master Planning web site to reflect the Department's final decision on each agenda item. If the Department plans to act on any agenda item within the 30-day comment period, it will provide public notice of that fact.

The semi-annual meetings will include discussion of any management activities that may require a master plan amendment or variance pursuant to Chapter NR 44, Wis. Admin. Code. NR 44.04 (1)(c) defines a master plan *amendment* as "a change in a management classification or subclassification of a property or management area within a property without a change in the goal and objectives for the property." NR 44.04 (1)(d) defines a master plan *variance* as "a change in management activity or use described in the master plan that is consistent with the area's land management classification and does not constitute a change in an objective for management or public use of the area as specified in the plan."

In considering whether any proposed activity requires a master plan *amendment* or *variance*, the Department applies the NR 44 definitions on a case-by-case basis. In considering whether a master plan *variance* is necessary, for example, the Department will consider such things as:

- Whether a proposed management prescription differs from those described for a given area in the master plan;
- Whether a proposed management activity for an area is specifically listed in the master plan;
- Whether changes to short-term objectives are proposed, provided the long-term objectives would still be met.

For example, in the following scenarios, the Department would seek a variance:

- Damage from a naturally occurring event, such as a fire or windstorm or forest insects or disease, requires a salvage harvest that, although consistent with area objectives, exceeds or would result in exceeding the 15-year harvest level for an area as specified in the master plan.
- If experience demonstrates that to facilitate achieving the desired future condition for the area, the Department proposes a harvest that exceeds or would result in exceeding the 15-year harvest level for the area as specified in the master plan.
- The opportunity exists for a recreational project development not specifically identified in the plan.
- A catastrophic weather event requires closure, movement and reconstruction of a public recreation facility, e.g., a boat landing.

Timber Sale Procedures

1. Identification of stands

Annually, the Brule River State Forest (BRSF) Superintendent and forestry staff confirm which forest stands are to be evaluated for harvest. Specific harvest plans are based on the objectives for the forest that have been established in the BRSF master plan. The Department utilizes a computer based forest reconnaissance (RECON) data system that maintains data on "stands" of trees (i.e., groups of trees uniform in species composition, structure and age class distribution growing on a relatively uniform site) within the state forest. For each stand, the Department maintains information including species, size of stand, size class of trees, volume, age, density, condition and silvicultural prescription. Stands are scheduled for harvest based on data previously entered by the forester. Once the state forest staff have confirmed which stands are to be evaluated for harvest, there are a number of steps involved prior to the harvest.

2. Conformance with the masterplan

Prior to conducting an on-site visit to the selected stands, the forester confirms that the potential harvest of these areas aligns with the master plan. Both the forest-wide goals and more specific land management area goals are reviewed. This information helps the forester in evaluating harvest possibilities and in making silvicultural decisions if a timber sale is warranted.

3. Preliminary evaluation

The forester conducts a field evaluation to determine if a harvest is warranted. This involves verifying that the stand's reconnaissance (RECON) data are accurate, and that other factors such as pests, weather, or fire have not adversely affected the stand. If the stand has not developed as anticipated and a sale is not warranted, the forester updates the RECON information for that stand and reschedules any management activities.

4. Development of a proposed harvest plan

If a timber sale is warranted, the forester develops a proposed harvest plan or "prescription" based on the preliminary evaluation. In doing so, the forester will develop a harvest plan that is designed to produce a desired outcome while considering the potential impacts to the watershed, endangered and cultural resources, wildlife habitat, aesthetics, and recreation.

Details of the harvest are carefully considered, such as: necessary access; location of landings and trails; water quality, aesthetic, cultural, recreational, wildlife, and endangered resource issues; ways to avoid potential conflicts in the sale set-up; suitable times of year for the harvest; and assurance the tract will be regenerated within the capabilities of the site. The prescription includes a description of which trees will be harvested and left after sale completion, and what follow-up treatment will be required such as site preparation or tree planting.

In developing the prescription, the forester consults with other DNR resource professionals (e.g. wildlife, waters, endangered resources, and fisheries). These other professionals evaluate the impacts, if any, of the harvest prescription on other resources in the forest to assure that the harvest will not negatively impact those resources. The forester would revise the harvest plan to address any additional concerns expressed.

5. Public notice and comment

Pursuant to the BRSF Master Plan's public communication plan, the Department will post information on proposed timber sales, by acreage and area (including town/range/section data) on the DNR Website for BRSF

Master Planning. Proposed timber sales will be discussed at the semi-annual public meetings, and the Department will consider comments on proposed timber sales for 30 calendar days following each semi-annual meeting.

6. Finalize harvest prescription

After receiving input from the various resource professionals and the public review process, the forester incorporates any necessary changes into the harvest prescription. At this point the prescription is finalized and ready to be implemented in the field.

7. Mark Boundaries and identify trees to be

Once the prescription has been finalized, the forester begins implementing it. This involves identifying the exterior boundaries of the timber sale and identifying harvest methods within the sale. In addition, the forester may indicate landing and road locations and areas protected or modified because of water quality, aesthetic, recreational or ecological reasons. All of these areas are indicated by different colors of paint. On some sales, the individual trees to be harvested or trees to be left are also marked with paint.

8. Appraise the sale

A volume estimate of the sale is completed and documented as part of a timber sale prospectus, as more fully described in paragraph 10 below. In doing so, the forester also evaluates factors such as marketability, wood quality, skidding, felling and bucking, and road construction needs. Using these factors, an appraisal of the value of timber is made and minimum bids are established for each species to be sold. The timber sale appraisal is documented on Form 2460-1.

9. Timbersale write-up

Four documents complete the paperwork for a timber sale:

a. Timber sale notice and cutting report **(**Form 2460-1) – This form summarizes all of the tabular data and is used to track sale progress, including the volumes and values harvested from the sale..

b. Narrative (Form 2460-1A)– Documents the rationale and considerations the forester used in establishing the sale. This document contains a written version of the prescription, including discussion of the all the factors that were considered when making the decision to harvest, and the measures to be taken to protect surrounding resources during the harvest.

c. Map -- Depicts the location of the sale area in relation to other features of the forest including roads, trails, surrounding cover types, trails, streams, rivers, lakes and identifies the trees to be cut along with any operational requirements. The map lists all requirements of the timber sale including cutting specifications, landing locations, seasonal restrictions, and other details of the timber sale. The map is very important and is used on-site by the logger when harvesting the sale. The narrative, cutting notice and report, map and contract are kept in the local DNR office as historical records of the sale activity.

d. RECON Update – RECON information is updated based on the data generated from the initial assessment and volume estimate.

The State Forest Superintendent and Area Forestry Leader must approve all state forest timber sales. Small sales, under $3000 in value, may be sold directly to logging contractors at the discretion of the State Forest Superintendent. Sales under $3000 are normally used only when associated with a development project or in a sensitive area. For example, this has been used when constructing sections of the present ski trail. Sales in sensitive areas (e.g. high recreational use areas, sites with endangered & threatened species concerns, scenic management areas) may also be reviewed by the Regional Forester or Bureau of Forest Management at Central Office.

10. Solicit bids and select winning bidder

Typically once or twice a year, a group of timber sales are made available for sale. A “prospectus” is prepared that includes maps and prescriptions for all the individual timber sales as well as a number of other procedural items common to all of the sales. The prospectus is developed prior to advertising and sending out the group of sales available for a particular bid opening. The prospectus is made available to all potential bidders. The maps accompanying the prospectus are the same individual timber sale maps developed in the write-up step. Timber sale bid openings must be advertised in a paper with general circulation in the county in which the sale is located. Loggers submit sealed bids for the designated timber to be harvested on each sale. The high bid is generally accepted unless there are problems with past performance regarding the logger submitting the high bid.

11. Timbersale contract

The Department prepares a separate contract for each individual timber sale outlining the relationship between the state and the logger in addition to the specifications listed in the prospectus. A bond is also required to assure performance on the sale. The bond is 15% of the winning bid on the sale.

12. Monitoring the sale

Foresters meet with the logger on site prior to starting the harvest and also periodically during the sale to ensure the harvesting is done according to the contract. The administering forester is responsible for maintaining records on the progress on the sale, the volume of wood harvested, and being sure the wood has been paid for according to the contract. Funds on state timber sales are remitted to the DNR central office for deposit into the State Conservation Fund.

13. Sale completion

When all harvest operations have been completed—e.g. all the wood has been accounted for and paid for, all on-the-ground contract requirements have been met, and all the post-harvest RECON information has been updated—the sale can be officially "closed" and the performance bond returned to the logger.

The Department periodically monitors closed timber sales to assure that forest regeneration occurs as planned. Should the anticipated regeneration of a site fail for whatever reason, additional efforts are undertaken to reforest the site. This may include replanting, releasing young trees from competing vegetation or preparing the site for reseeding or replanting. The corresponding RECON information would again be updated in these instances. The Department will discuss any problems related to regenerating sites at the semi-annual public meetings.

Area 4 – Scenic River Corridor

The following clarification was prepared to describe the boundaries of Area 4:

The scenic corridor includes all the public lands on both sides of the Brule River from Lake Superior upstream to CTH B where it joins the Brule Bog and Spillway Native Community Management Area. Forest covertypes vary through this area with common types being ash and alder dominated floodplain forest, upland aspen, mixed aspen/fir forest, boreal mixtures of pine/hardwood/fir/spruce, and northern hardwood forests. Along each side of the river the management area extends to a management line corresponding to the topography and vegetation change found where the slopes leading to the river flatten out to a more level upland or a minimum of 400 feet from the river's edge whichever is greater. This passive management zone encompasses an average distance of 1400 feet on each side of the river. It should be recognized that not all river shorelands are part of the state forest and some private owners maintain lawns, buildings and other settings.

This photo, taken by Cathy Khalar, was featured on the back cover of Wisconsin Natural Resources Magazine in January 2004.

Naturalist Programs

Josh McIntyre was the property naturalist for 2003 and will return for 2004. During 2003 he spent about half his time at canoe landings notifying canoeists about the rules of the river; no glass; keep quiet; no loose litter; respect private property. The rest of his time was spent preparing for and presenting interpretive programs in the campgrounds and the community.

The time spent at the canoe landings has made a difference in the behavior of people canoeing the river. Josh is able to prevent violations from happening by advising that glass is not allowed and that litter needs to be tied into the boat. His presence gives rangers the confidence that people have already had a warning and that citations may be in order.

Josh also helps get people oriented to the river and what they may expect to see on their trip. Through a donation from Brule Preservation Inc. a one page field guide is being developed that canoeists can take along to identify the common sights along the river – hooded mergansers, the different fish, kingfishers, herons, etc. The canoeists will be asked to leave the field guide hanging on a sign post at their take-out for another group to use or for it to be returned to an up-river landing.

Community programs were given in the campgrounds, on buses, at canoe landings, to school groups, scout groups, other youth groups, camps, and the general public. The programs help participants understand the history of the forest and sustainable forest management, but most of all

the programs help enhance their overall experience on the Brule. Two programs in particular were used in 2003; "2 Million Years in a little under 2 Hours" gave a brief timeline of the geologic history of the Brule Valley; "What is it?" taught some basic identification techniques. Over 550 people participated in community programs during the 2003 summer season.

Josh continued to work over the winter as funding was available and presented programs on request to the Bad River Tribe, UW-Superior, Northland College, and the EPA office in Duluth.

For 2004 Josh will be reprising his position and the property will also be hiring an intern to duplicate the landing host efforts so that better coverage of landings can be provided. Additional community programs will be offered as well. A special emphasis in programs during 2004 will be on the centennial of forest management in Wisconsin. The programs will also celebrate Smokey Bear's 60th birthday!

Fire Safety Program

The state forest received a grant to hire staff to advise landowners within the boundary about fire safety and how to protect their property from wildfire. A person will be hired to start around Memorial Day and they will spend their summer contacting landowners along the river to arrange visits to consider their property. At these visits the landowners will get materials and advice on how they can prevent fires from occurring and also how their properties can be made safer in the event that a fire occurs. The project will end around Labor Day.

Fishery Management

Beside the normal program of fisheries activities (sea lamprey and beaver control, lake run salmonid monitoring) in 2003 fisheries staff were lucky enough to have a Trout Stamp and Brule Preservation Grant supported habitat improvement crew supervised by fisheries technician Bill Blust. During the summer, the crew installed fifty habitat logs in the Little Brule (just upstream of Dennis road), completed a major spawning restoration site on the Brule's East Fork and continued improvement work on about a one mile stretch of Sandy Run (this habitat work was extended upstream with the replacement of the US 2 crossing of Sandy Run). In addition, the crew continued to do needed maintenance work on the more than thirty existing habitat improvements in the watershed.

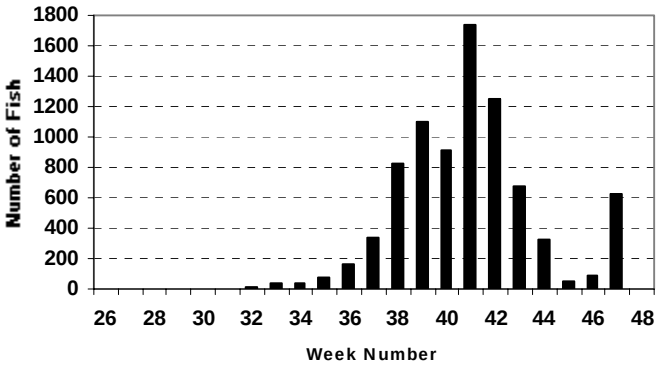
During 2004 there will be continued work to improve habitat on tributaries to the Brule by removing debris and alders. Another project will place logs in the Brule River between highway B and Big Lake to deepen the channel and provide habitat. Gravel may be added as well to provide additional spawning opportunities.

Sandy Run habitat improvement

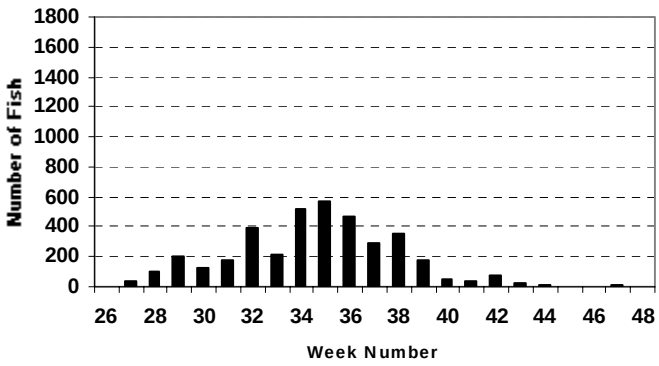
2003 BRULE RIVER FALL FISHWAY UPDATE

A total of 13,336 trout and salmon were counted as they migrated upstream through the lamprey barrier/fishway from June 30 through December 2. The fall portion of the steelhead return was again very good with 8251 entering the river. The peak occurred during the second week of October. The brown trout return was 3872 with the peak occurring from mid August through the first week September. Low clear water levels likely contributed to a more spread out run. Their numbers are somewhat reduced from previous years (may have been impacted by the 2001 spring flood) but still within five percent of the ten year average. The coho return of 1079 was the lowest since monitoring began in 1986. The spring flood of 2001 directly had a large impact on this year class. We have observed a reduction in coho numbers along the entire south shore since the mid 1990's, likely due to poor smolt survival once they enter the lake and numerous stream flood events. Chinook returns continue to decline on the river, which reflects similar trends along the entire US shoreline of Lake Superior. Poor smolt survival as they enter the lake resulting in reduced adult numbers three to four years later has contributed to the downward trend. Additionally, 16 pink salmon, 3 brook trout, 1 lake trout and 1 splake were counted.

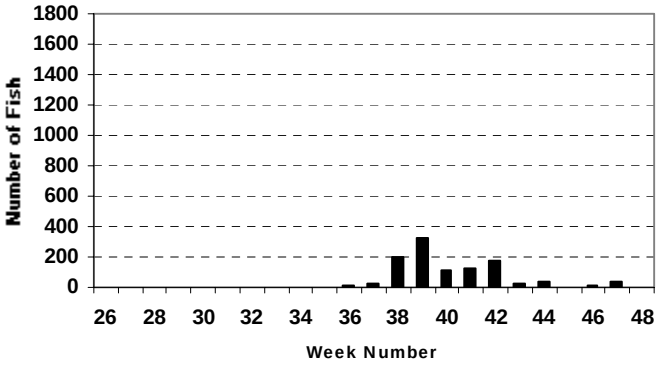
STEELHEAD



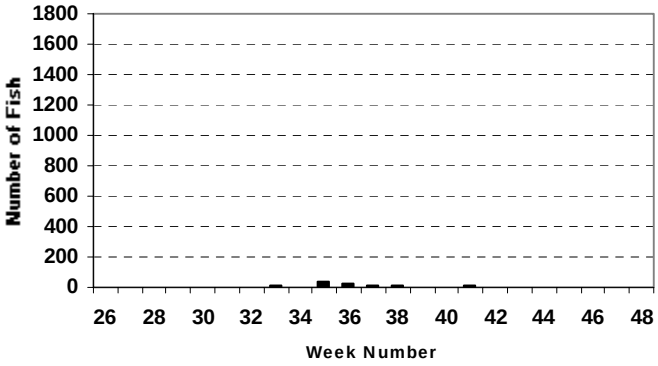
BROWN TROUT



COHO SALMON



CHINOOK SALMON

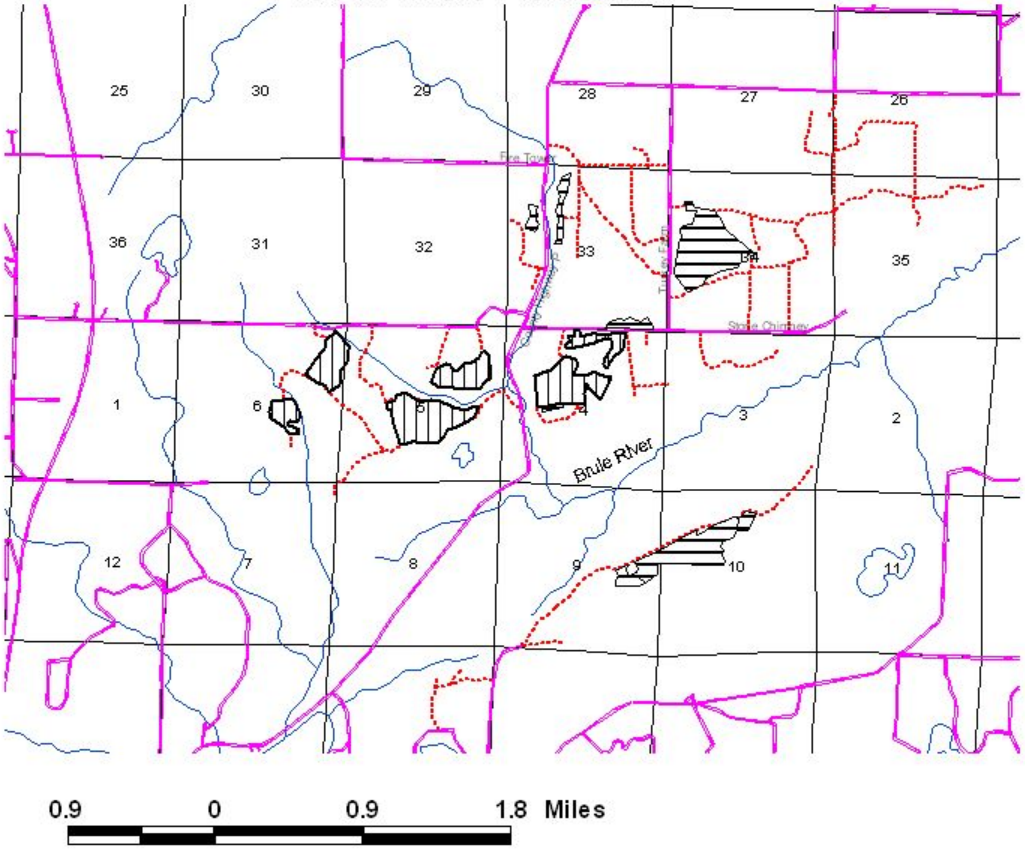


Year	Brown Trout	Chinook Salmon	Coho Salmon	Steelhead Fall	Steelhead Spring	Steelhead Total	Estimated Stocked Steelhead
2000-01	4091	353	1580	4463	924*	5387*	839
2001-02	5533	258	1615	5484	1124	6608	1118
2002-03	4425	271	3249	7447	2035	9482	1985
2003-04	3872	113	1079	8251	- - -	- - -	1638

* incomplete total due to spring 2001 flood

Spring 2004
Brule River State Forest
Tree Planting

Location: Douglas County, Wisconsin
T 45N R11W and T 46N R11W



0.9 0 0.9 1.8 Miles

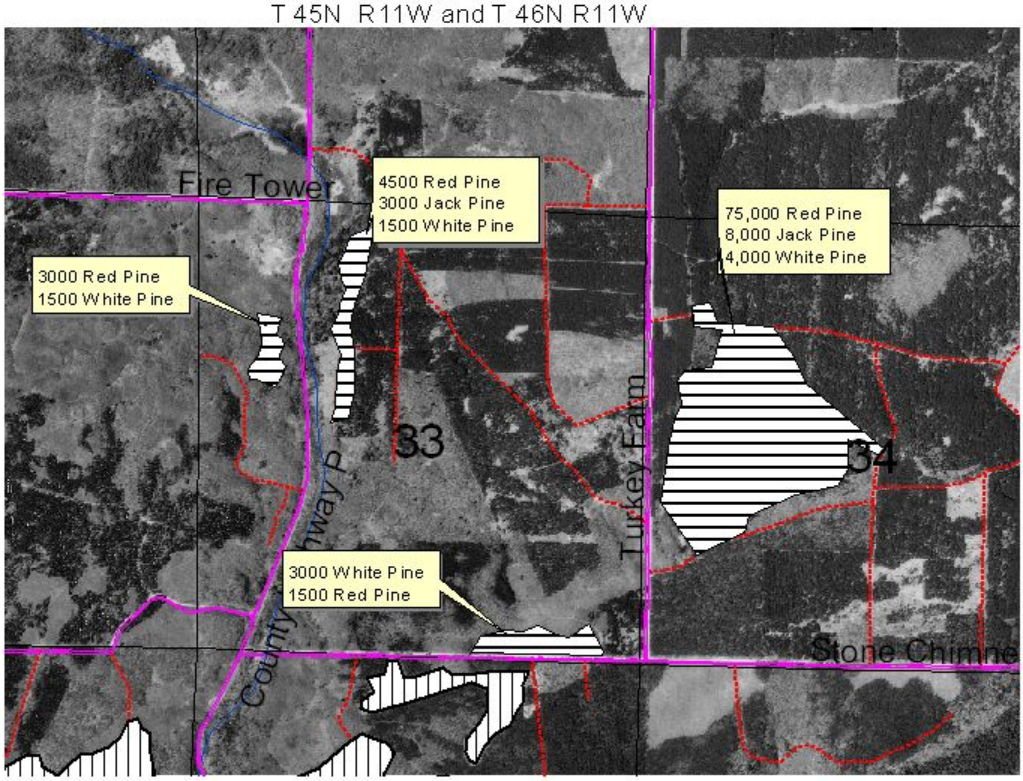
2004 Replanting Areas = 237 acres
2004 New Planting Areas = 200 acres
Roads
Woods Roads
Waterbodies
Section Lines (labelled with numbers)

N
W E
S

Dave Schulz
January 2004
BRSF

Spring 2004
Brule River State Forest
Tree Planting

Location: Douglas County, Wisconsin
T 45N R11W and T 46N R11W



0.3 0 0.3 0.6 Miles

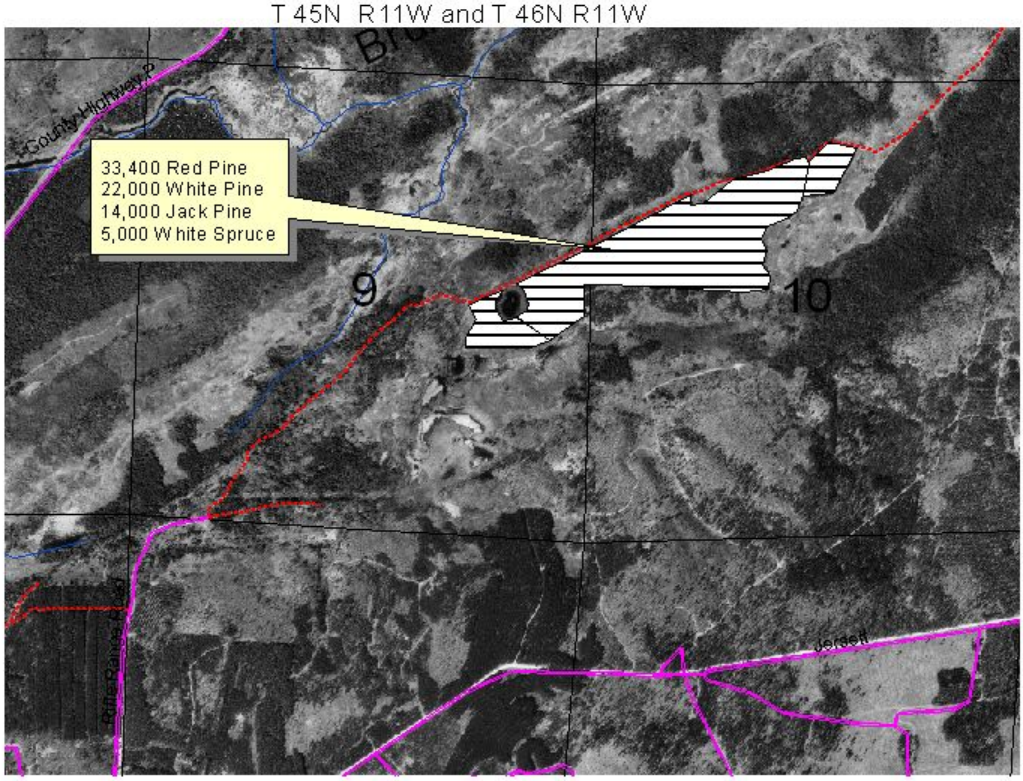
N
W E
S

2004 Replanting Areas = 237 acres
2004 New Planting Areas = 200 acres
Roads
Woods Roads
Waterbodies
Section Lines (labelled with numbers)

Dave Schulz
January 2004
BRSF

Spring 2004
Brule River State Forest
Tree Planting

Location: Douglas County, Wisconsin
T 45N R11W and T 46N R11W



0.3 0 0.3 0.6 Miles

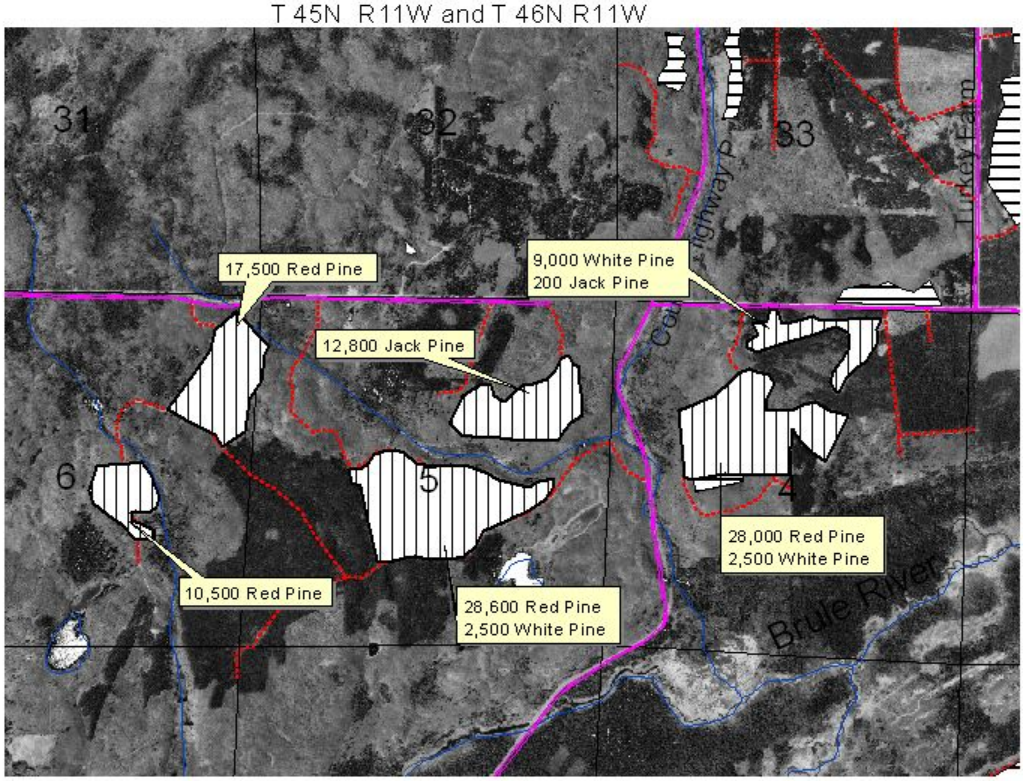
N
W E
S

2004 Replanting Areas = 237 acres
2004 New Planting Areas = 200 acres
Roads
Woods Roads
Waterbodies
Section Lines (labelled with numbers)

Dave Schulz
January 2004
BRSF

Spring 2004
Brule River State Forest
Tree Planting

Location: Douglas County, Wisconsin
T 45N R11W and T 46N R11W



0.4 0 0.4 0.8 Miles

N
W E
S

2004 Replanting Areas = 237 acres
2004 New Planting Areas = 200 acres
Roads
Woods Roads
Waterbodies
Section Lines (labelled with numbers)

Dave Schulz
January 2004
BRSF

Brule River State Forest--TRACT 7-04
Hazel Chimney Pine Thinning
Land Management Area = Hazel Prairie Pines (area 9)
Red Pine Plantation – 1958 and 1965 origin
First and Second Thinning--204 Acres

STAND DESCRIPTION
This thinning involves 2 separate stands of red pine which were planted 7 years apart. The majority of this stand was planted around the year 1965. Portions of this area was thinned about 10 years ago while most of the area has never been thinned. The majority of the stand was planted into wild land or old pasture land, and has a moderate understory presence of hazel and scrub oak. Areas that were planted into fields have little or no understory development. The land is gently rolling and has very sandy soils. This area is located just to the northeast of the area that underwent heavy salvage logging from the hail storm of 2000. Much of this area suffered slight damage from the hail storm as well. There is an existing road system within the area to be thinned.

GOALS
This stand falls within the Hazel Prairie Pines unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to maintain a dry pine forest ecosystem. The goal for this stand is to grow red pine to produce large diameter sawtimber.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION
This stand will be thinned by a combination of row thinning as well as marked selective thinning. The row thinning will likely be a every third row removal. Residual basal areas following this thinning will be between 90-120 square feet per acre. Harvesting may take place at any time of the year. Following the thinning, species diversity will increase as more sunlight is able to reach the forest floor. A considerable ground layer of vegetation will develop over time, along with an understory of primarily scrub oak and hazel.

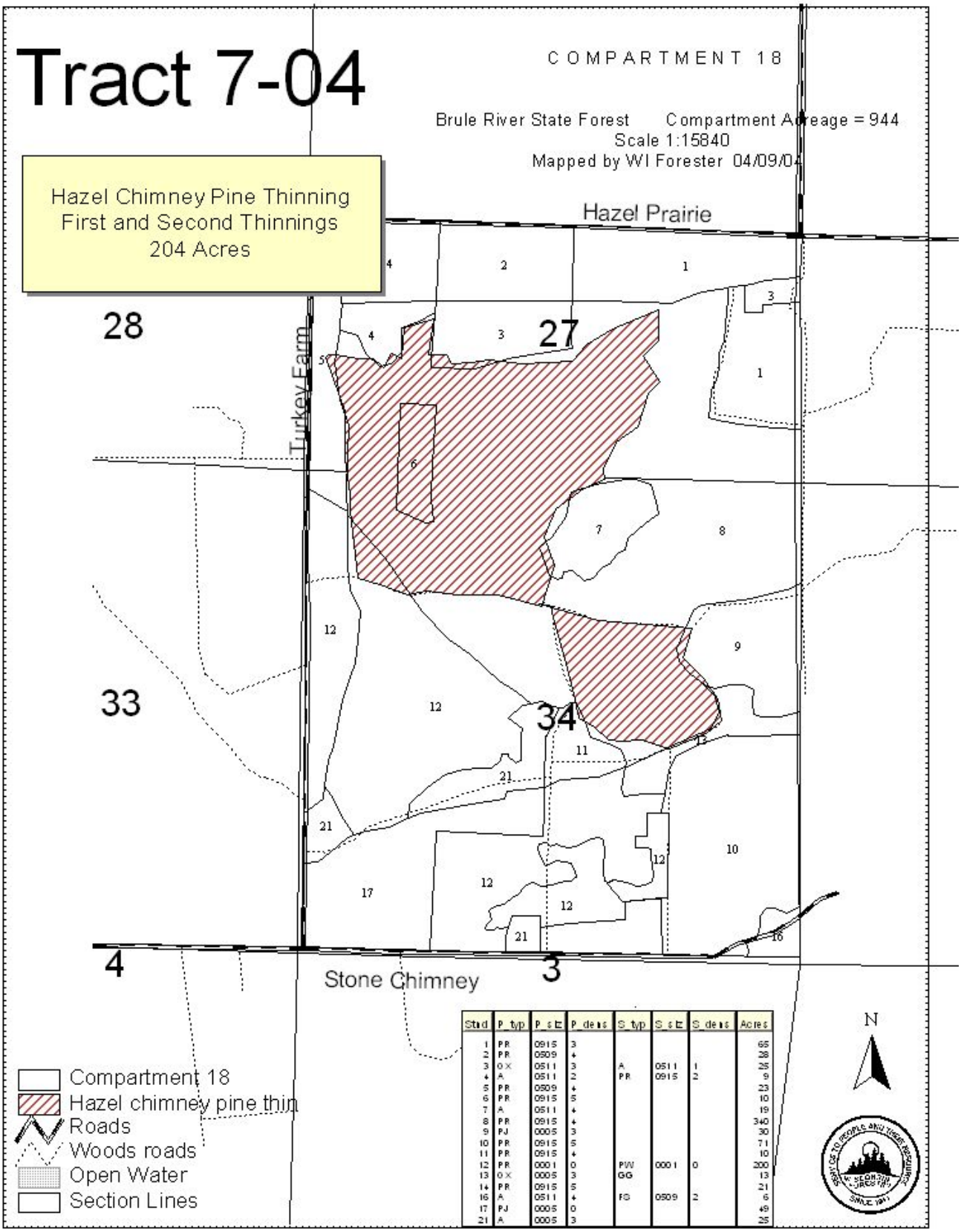
WATER QUALITY
The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. The nearest water body is the Brule River, located ½ mile to the southeast. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS
This thinning will not be seen from any high public use area, therefore little impact on aesthetics should be noticed.

WILDLIFE
This area is used by game and non-game, birds and animals. This thinning will change use patterns very little. Over time, understory plants will become more established, thereby improving habitat for species that require ground cover. The local DNR wildlife manager will be consulted before offering this tract for sale.

ENDANGERED RESOURCES
The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endanagered Resources staff will be consulted before offering this tract for sale.

RECREATION
Uses of this area include hunting, wildlife viewing, and hiking. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development.



Stnd	P_typ	P_sIt	P_dens	S_typ	S_sIt	S_dens	Acres
1	PR	0915	3				65
2	PR	0509	4				28
3	OX	0511	3	A	0511	1	25
4	A	0511	2	PR	0915	2	9
5	PR	0509	4				23
6	PR	0915	5				10
7	A	0511	4				19
8	PR	0915	4				340
9	PJ	0005	3				30
10	PR	0915	5				71
11	PR	0915	4				10
12	PR	0001	0	PW	0001	0	200
13	OX	0005	3	GG			13
14	PR	0915	5				21
16	A	0511	4	FG	0509	2	6
17	PJ	0005	0				49
21	A	0005	3				25

Brule River State Forest--TRACT 4-04
Snowmobile Trail Jack Pine
Land Management Area = Pine Forest and Barrens (area 10)
Jack Pine -- 1946 origin
47 acres

STAND DESCRIPTION
This stand consists primarily of mature jack pine, with occasional aspen, scrub oak, and balsam fir present. This stand was planted in 1946. Th understory is fairly limited, with hazel, fir, scrub oak, and white pine present. The majority of this stand has already been harvested, with this be the last piece to be harvested. This portion of the stand was held since it contained the healthiest appearing trees within this stand. Over the nex several years however, increases in jack pine budworm is expected, thereby prompting management activiites before significant mortality occur Topography is flat and soil is sand. The North Country Trail runs through this stand, as well as the snowmobile trail.

GOALS
This stand falls within the Pine Forest and Barrens management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to create a pine barrens community. The goal following this harvest is a fully stocked stand jack pine.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION
The stand will be harvested with a regeneration harvest removing all trees that are over 2 inches DBH. Following harvest, the site will be anchor chained to stimulate jack pine regeneration. An option to anchor chaining may be prescribed burning if conditions allow. Jack pine seed may be added to site by hand if cones on harvested trees are not numerous enough to regenerate the site. Since the snowmobile trail will be used as access, timing of the sale will avoid the time when the snowmobile trail is in use. Existing access roads and landings will be utilized.

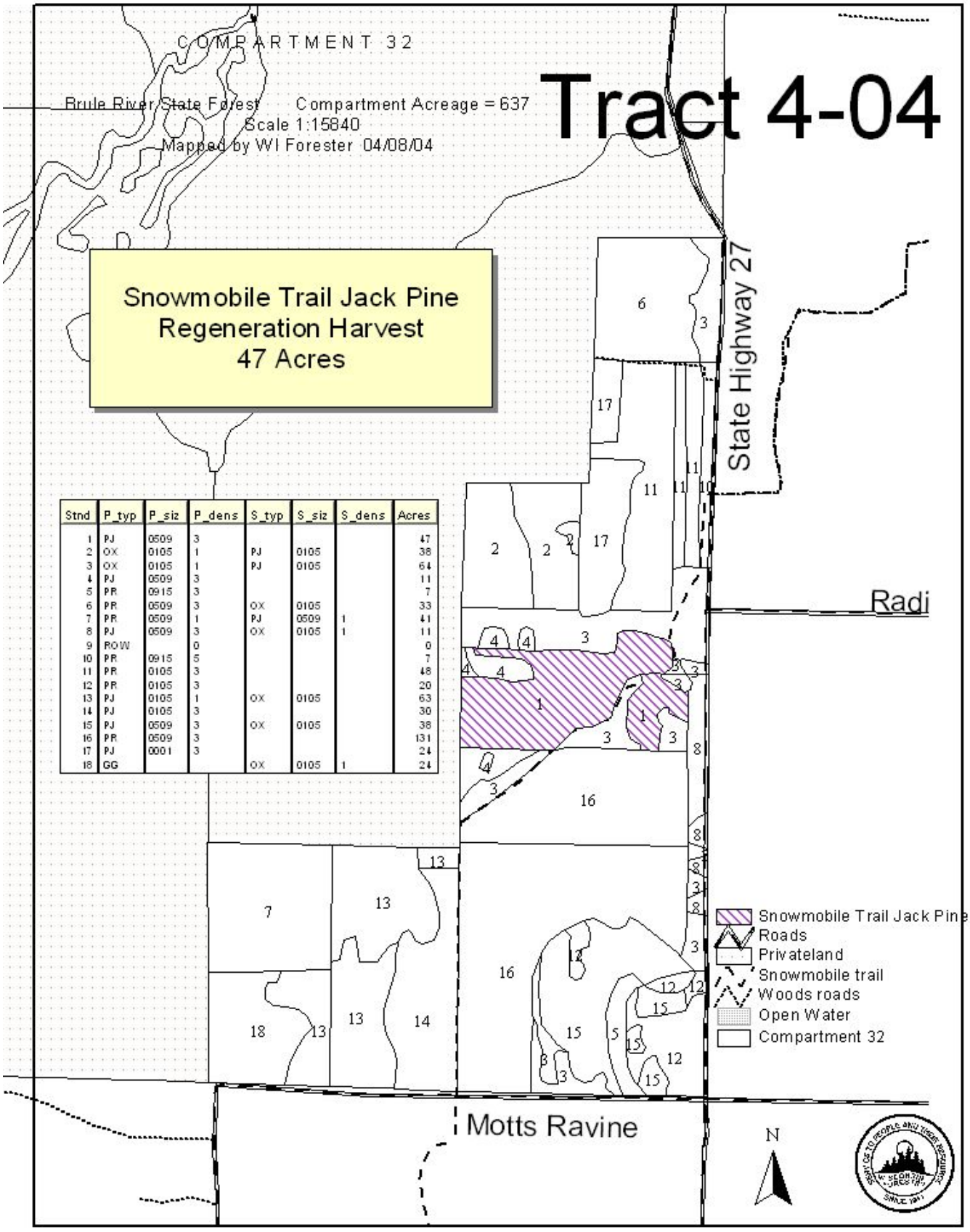
WATER QUALITY
The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. T nearest water body is the Brule river, located more than ½ mile to the northwest. No negative impact is expected. Local DNR water quality st will be consulted before this tract is offered for sale.

AESTHETICS
The snowmobile trail runs through this stand, as well as the North Country Trail. The view from both of these trails will change over time from a mature forest to open regenerating forest.

WILDLIFE
This area is used by game and non-game, birds and animals. This harvest will change use patterns very little. Similar habitats, both pre sale and post sale, are found in the vicinity.

ENDANGERED RESOURCES
The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, rare community that may occur as a result of this management activity. Bureau of Endanagered Resources staff will be consulted before offerin this tract for sale.

RECREATION
Uses of this area include hunting, wildlife viewing, hiking, and snowmobiling. Impacts to snowmobiling will be minimized due to timing the sa to avoid snowmobile season. The snowmobile trail will be restored to original or better condition following harvest activities. The North Coun Trail will remain open and clear throughout the harvesting activity. The impact on hunting and wildlife viewing will be to change the habitat fr mature forest to young forest.



Stnd	P_typ	P_siz	P_dens	S_typ	S_siz	S_dens	Acres
1	PJ	0509	3				47
2	OX	0105	1	PJ	0105		38
3	OX	0105	1	PJ	0105		64
4	PJ	0509	3				11
5	PR	0915	3				7
6	PR	0509	3	OX	0105		33
7	PR	0509	1	PJ	0509	1	41
8	PJ	0509	3	OX	0105	1	11
9	ROW		0				0
10	PR	0915	5				7
11	PR	0105	3				48
12	PR	0105	3				20
13	PJ	0105	1	OX	0105		63
14	PJ	0105	3				30
15	PJ	0509	3	OX	0105		38
16	PR	0509	3				131
17	PJ	0001	3				24
18	GG			OX	0105	1	24

Brule River State Forest--TRACT 1-04
Jersett Road Pine Thinning
Land Management Area = Pine Forest and Barrens (area 10)
Red Pine Plantation – 1968 and 1972 origin
Second Thinning--129 Acres

STAND DESCRIPTION
This thinning involves 2 separate stands of red pine. Most of these stands were thinned about 10 years ago. Portions of the stands to the east were not thinned during the last thinning and no are in need of a thinning. Tree crowns are touching, thereby competing each other for available sunlight. Ground vegetation is very scarce due to light conditions. Surrounding cover types primarily pine, with scattered scrub oak and aspen types found. These stands are located on the northern top edge of an outwash valley leading to the Brule River. Jersett road is located wi this valley.

GOALS
This stand falls within the Pine Forest and Barrens management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are create a pine barrens community. A short term management objective for this area is to gradually thin existing red pine plantations to a "natural" condition. The goal for this stand is to gro red pine to produce large diameter sawtimber while allowing natural conversion to a mixed jack pine/red pine forest.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION
This stand will be thinned by a marked, selective thinning process removing the smaller trees, poorly formed trees, and any trees showing signs of defect. Some areas that have not been previously thinned will be thinned by entire row removal. Residual basal areas following this thinning will be between 90-120 square feet per acre. Harvesting may take place at any time o the year except for the time period when the snowmobile trail is open (Dec 15-March 15) to avoid conflicts with that use. Following the thinning, species diversity will increase as more sunlight is able to reach the forest floor. A considerable ground layer of vegetation will develop over time, along with an understory of primarily scrub oak and hazel.

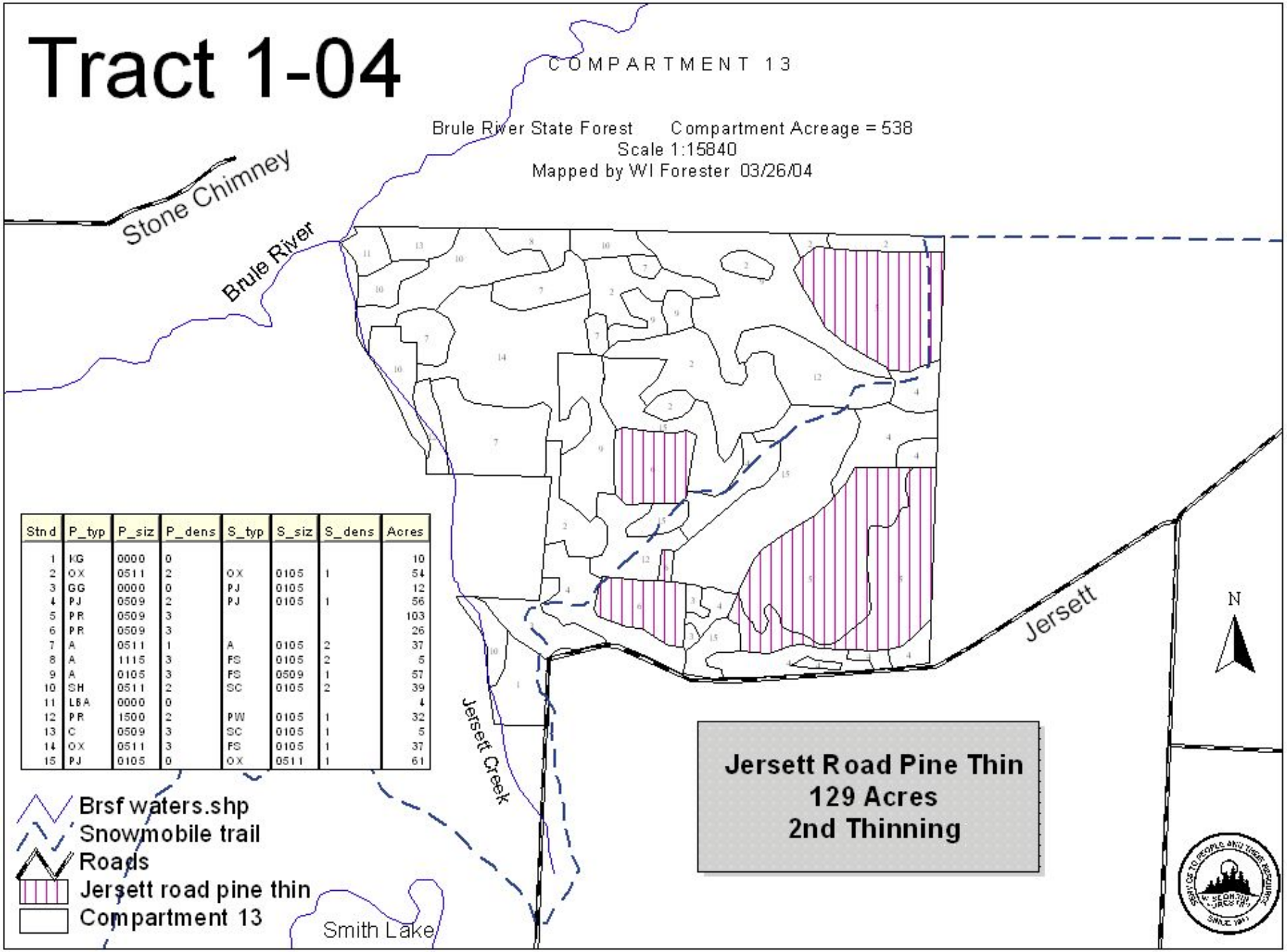
WATER QUALITY
The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. The nearest water body is the headwaters of Jersett Creek, located ¼ mile to the southeast. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS
The snowmobile trail runs through the middle of this stand. The snowmobile trail will be utilized for access but the sale will be completed in the off season for snowmobiling. Since this is a thinning, aesthetic impacts will be minimal.

WILDLIFE
This area is used by game and non-game, birds and animals. This thinning will change use patterns very little. Over time, understory plants will become more established, thereby improvin habitat for species that require ground cover. The local DNR wildlife manager will be consulted before offering this tract for sale.

ENDANGERED RESOURCES
The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a resu of this management activity. Bureau of Endanagered Resources staff will be consulted before offering this tract for sale.

RECREATION
Uses of this area include hunting, wildlife viewing, hiking, and snowmobiling. Impacts to snowmobiling will be minimized due to restricting harvest to non-use times. Snowmobile trail wi restored to original or better condition following harvest activities. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development.



Stnd	P_typ	P_siz	P_dens	S_typ	S_siz	S_dens	Acres
1	KG	0000	0				10
2	OX	0511	2	OX	0105	1	54
3	GG	0000	0	PJ	0105		12
4	PJ	0509	2	PJ	0105	1	56
5	PR	0509	3				103
6	PR	0509	3				26
7	A	0511	1	A	0105	2	37
8	A	1115	3	FS	0105	2	5
9	A	0105	3	FS	0509	1	57
10	SH	0511	2	SC	0105	2	39
11	LBA	0000	0				4
12	PR	1500	2	PW	0105	1	32
13	C	0509	3	SC	0105	1	5
14	OX	0511	3	FS	0105	1	37
15	PJ	0105	0	OX	0511	1	61

Brule

River State Forest--TRACT 2-04
Bong Forest Pine Thinning
Land Management Area = Pine Forest and Barrens (area 10)
Red Pine Plantation – 1973 origin
First Thinning--228 Acres

STAND DESCRIPTION

This thinning involves a large area of red pine that was planted in 1973. None of this area has been previously thinned. Tree crowns are touching, thereby competing each other for availabl sunlight. Ground vegetation is very scarce due to light conditions. Surrounding cover types are primarily pine, with scattered scrub oak and aspen types found. This stand is located just w of the Bong School Forest, between Hwy S and the snowmobile trail.

GOALS

This stand falls within the Pine Forest and Barrens management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are create a pine barrens community. A short term management objective for this area is to gradually thin existing red pine plantations to a "natural" condition. The goal for this stand is to gr red pine to produce large diameter sawtimber while allowing natural conversion to a mixed jack pine/red pine forest.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

This stand will be thinned by removing every other row of trees. This is done to facilitate equipment access into the stand to remove the wood products. Residual basal areas following this thinning will be between 80-120 square feet per acre. Harvesting may take place at any time of the year due to dry soil conditions. Following the thinning, species diversity will increase as more sunlight is able to reach the forest floor. A considerable ground layer of vegetation will develop over time, along with an understory of primarily scrub oak and hazel.

WATER QUALITY

The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. The nearest water body is the Brule River, located almost a mile to the north. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS

Due to the nature of a thinning operation, little aesthetic impact is expected. The snowmobile trail is located north of this stand, and little used woods roads will be utilized in accessing this sale.

WILDLIFE

This area is used by game and non-game, birds and animals. This thinning will change use patterns very little. Over time, understory plants will become more established, thereby improvin habitat for species that require ground cover. The local DNR wildlife manager will be consulted before offering this tract for sale.

ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a resu of this management activity. Bureau of Endanagered Resources staff will be consulted before offering this tract for sale.

RECREATION

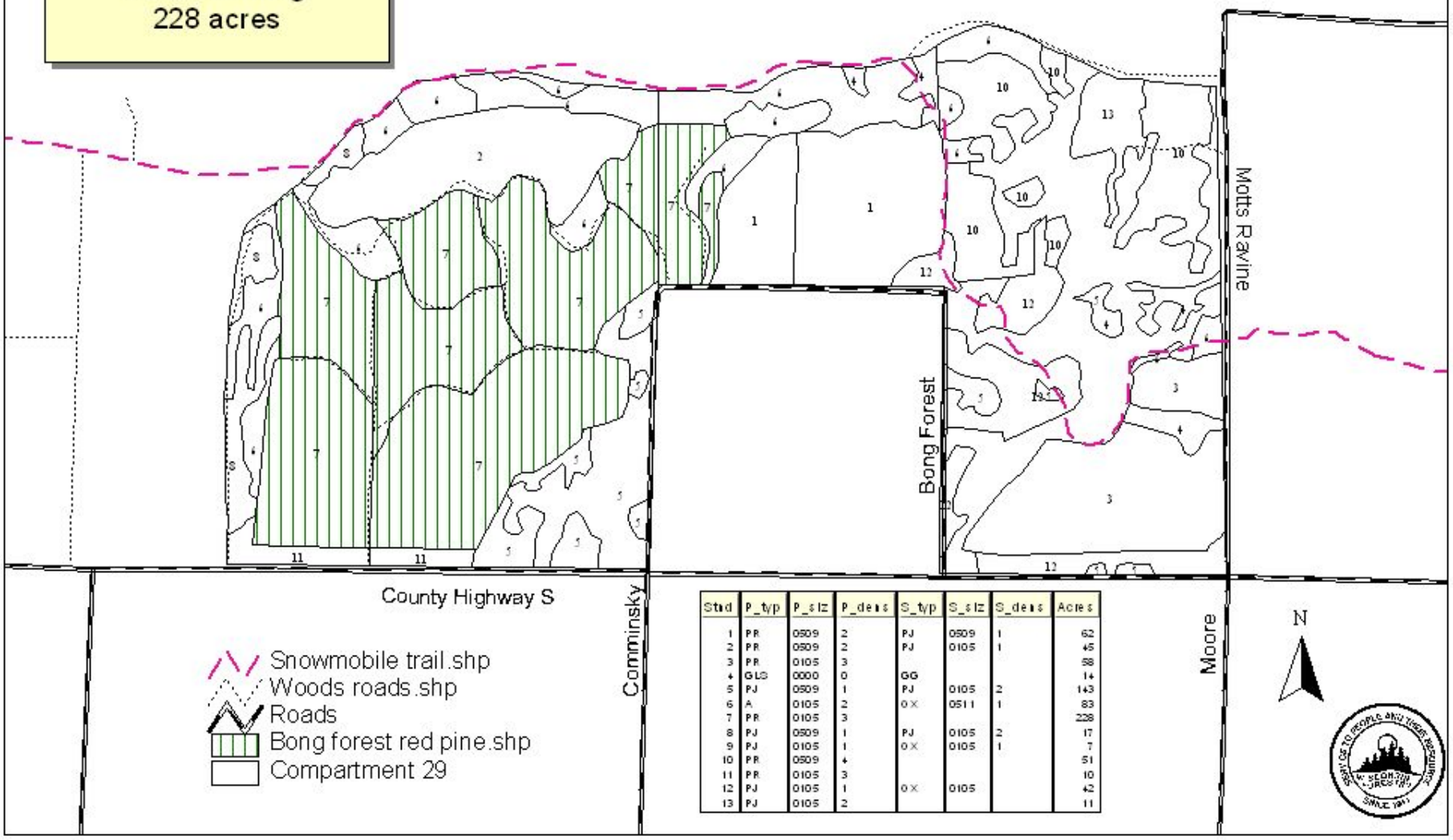
Uses of this area include hunting, wildlife viewing, berry picking, and hiking. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development. Access for activities such as berry picking and hiking may be improved due to the use of the access roads.

Tract 2-04

COMPARTMENT 29

Brule River State Forest Compartment Acreage = 771
Scale 1:15840
Mapped by WI Forester 03/26/04

Bong Forest Red Pine
First Thinning
228 acres



Stnd	P_typ	P_siz	P_dens	S_typ	S_siz	S_dens	Acres
1	PR	0509	2	PJ	0509	1	62
2	PR	0509	2	PJ	0105	1	45
3	PR	0105	3				88
4	GLS	0000	0	GG			14
5	PJ	0509	1	PJ	0105	2	143
6	A	0105	2	OX	0511	1	83
7	PR	0105	3				228
8	PJ	0509	1	PJ	0105	2	17
9	PJ	0105	1	OX	0105	1	7
10	PR	0509	4				51
11	PR	0105	3				10
12	PJ	0105	1	OX	0105		42
13	PJ	0105	2				11

Brule

River State Forest--TRACT 3-04
Town Hall Jack Pine
Land Management Area = Pine Forest and Barrens (area 10)
Jack Pine and Aspen stand -- 1945 origin
42 acres

STAND DESCRIPTION

This stand consists of a mixture of overmature jack pine and aspen, with scrub oak fairly common throughout the stand. This jack pine in this stand was planted in 1945. A fair amount of mortality has already occurred within the stand, causing the basal area to be low. A heavy understory of hazel is present within this stand. Topography is flat and soil is sand. This is locate nearby to the corner of Hwy S and Sandmon road, as well as the snowmobile trail which crosses Hwy S adjacent to the Highland town hall. The North Country Trail is also located about ¼ mile to the north of this stand.

GOALS

This stand falls within the Pine Forest and Barrens management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are create a pine barrens community. The goal following this harvest is a fully stocked stand of jack pine. On this site, a barrens community would not be complemented by surrounding red pi plantations at this time.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

The stand will be harvested with a regeneration harvest removing all trees that are over 2 inches DBH. Following harvest, the site will be anchor chained to stimulate jack pine regeneration. An option to anchor chaining may be prescribed burning if conditions allow. Jack pine seed may be added to site by hand if cones on harvested trees are not numerous enough to regenerate the site. This sale may occur at any time of the year due to sandy soils and planned scarification. Existing access roads and landings will be utilized.

WATER QUALITY

The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. The nearest water body is the Brule river, loca more than ½ mile to the northwest. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS

The snowmobile trail runs adjacent to portions of this stand. The snowmobile trail may be utilized for access for a small portion of the sale, but should not cause any major change to aesthetics due to adjacent pine plantations. The view of the sale from Hwy S will be shielded by a small strip of red pine plantation between the stand and the Hwy.

WILDLIFE

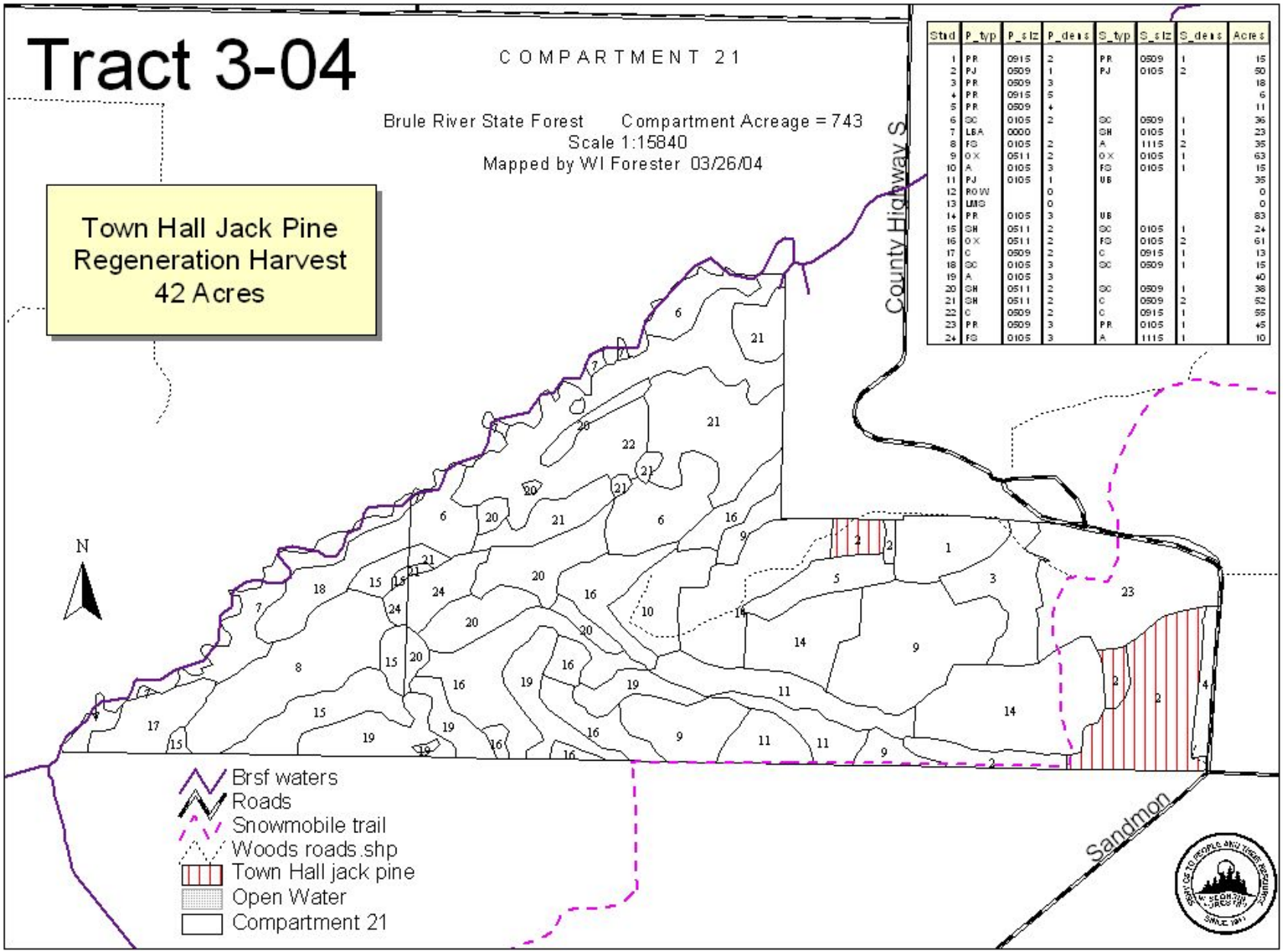
This area is used by game and non-game, birds and animals. This harvest will change use patterns very little. Similar habitats, both pre sale and post sale, are found in the vicinity.

ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a resu of this management activity. Bureau of Endanagered Resources staff will be consulted before offering this tract for sale.

RECREATION

Uses of this area include hunting, wildlife viewing, hiking, and snowmobiling. Impacts to snowmobiling will be minimized due to very little use of the trail to access the sale. At most, 1/8 of trail will be effected. The snowmobile trail will be restored to original or better condition following harvest activities. The impact on hunting and wildlife viewing will be to change the habitat from mature forest to young forest.



Stnd	P_typ	P_siz	P_dens	S_typ	S_siz	S_dens	Acres
1	PR	0915	2	PR	0509	1	15
2	PJ	0509	1	PJ	0105	2	50
3	PR	0509	3				18
4	PR	0915	5				6
5	PR	0509	4				11
6	SC	0105	2	SC	0509	1	36
7	LBA	0000		SH	0105	1	23
8	FS	0105	2	A	1115	2	35
9	OX	0511	2	OX	0105	1	63
10	A	0105	3	FS	0105	1	15
11	PJ	0105	1	UB			35
12	ROW		0				0
13	UMG		0				0
14	PR	0105	3	UB			83
15	SH	0511	2	SC	0105	1	24
16	OX	0511	2	FS	0105	2	61
17	C	0509	2	C	0915	1	13
18	SC	0105	3	SC	0509	1	15
19	A	0105	3				40
20	SH	0511	2	SC	0509	1	38
21	SH	0511	2	C	0509	2	52
22	C	0509	2	C	0915	1	55
23	PR	0509	3	PR	0105	1	45
24	FS	0105	3	A	1115	1	10

Brule River State Forest--TRACT 5-04
Hazel Prairie Birch
Land Management Area = Hazel Prairie Pines (area 9)
Birch and Hardwoods – 1930 origin
28 acres

STAND DESCRIPTION
This stand consists of mature white birch and red oak, with aspen, red maple, sugar maple, and basswood present. The understory consists primarily of a dense layer of hazel. The birch wi this stand is in a state of decline, with many trees already dead and many more showing signs of top dieback. Other species appear to be healthy, although individual oak is showing signs o mortality. Surrounding covertype is primarily a mixture of young aspen and birch which was cut 15 years ago from this same stand. At that time, the birch that was cut sprouted readily fro the stumpe, resulting in a high percentage of birch in the stand. The topography is rolling, with wet areas between dry ridgetops. This area lies north of Hazel Prairie road, in a transition are between the Bayfield Sand Plain to the south and the Mille Lacs Uplands to the north.

GOALS
This stand falls within the Hazel Prairie Pines management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to maintain a dry pine forest community, but specific goals for birch are to maintain 130 acres within this management unit. The goal following this harvest is to maintain the stand of hardwo with white birch being a major component of the future stand.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION
The stand will be harvested with a modified shelterwood cut, removing most birch and oak, and leaving all maple and aspen over 5 inches DBH. Selected birch and oak will be left as seed trees scattered through the sale. The maple and aspen will be left to prevent the aspen from sprouting and the maple will provide partial shade to prevent the site from drying out once the birch seedlings have sprouted. Scarification will be completed, either prior to, the same time as, or following the harvest to prepare a seedbed for birch and oak seed to fall into and germinate. This will likely be completed using fire control dozers to disrupt more than 50% of the soil surface. Due to age and condition of the trees, very little stump sprouting is expected. New access roads will be constructed due to the old access roads being seeded in heavily with 10 foot tall birch saplings. The harvest will be completed in summer/fall to facilitate site scarification.

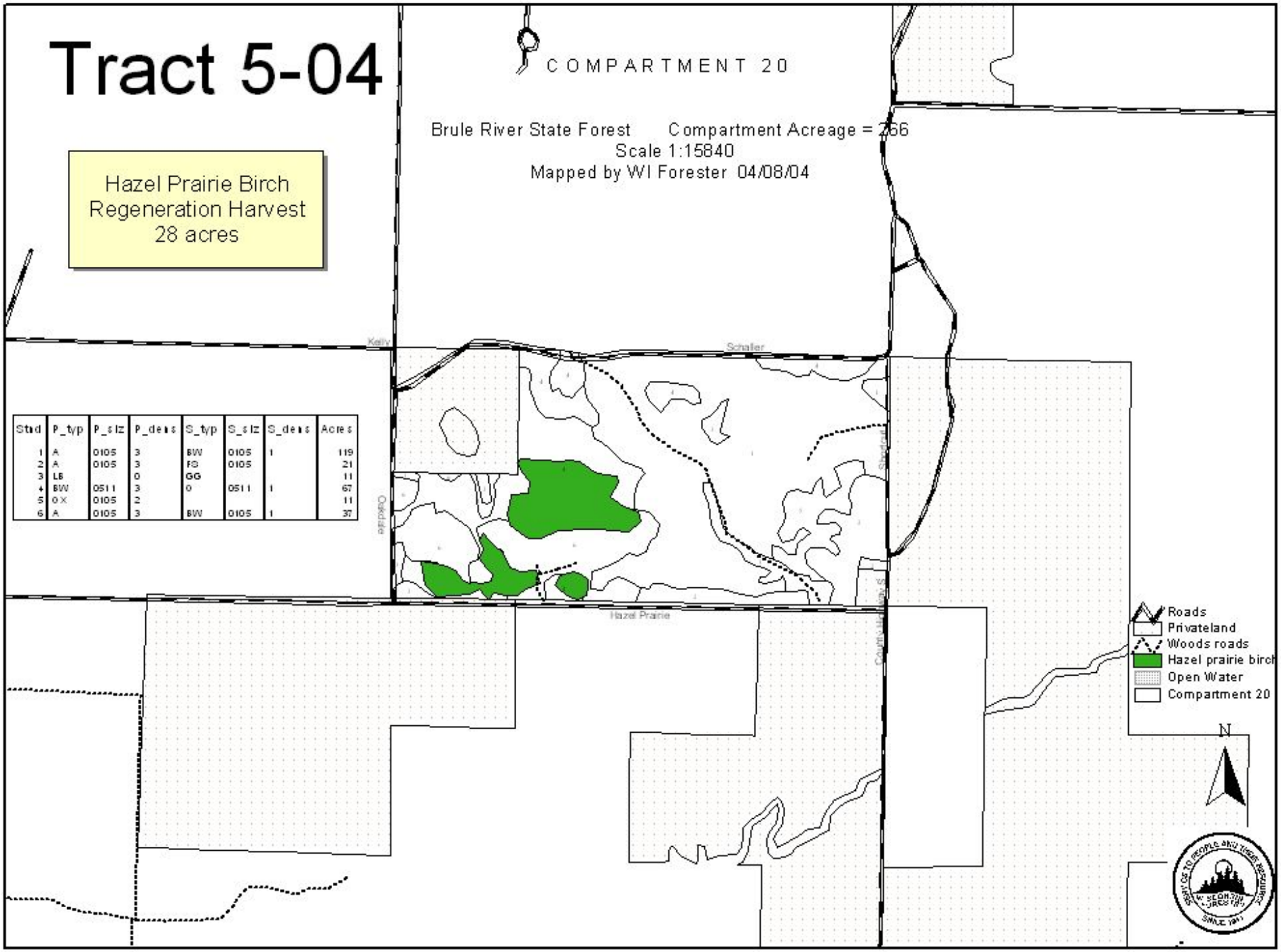
WATER QUALITY
The site is flat to gently rolling sandy till and is not adjacent to any water body, therefore there is little potential to influence surface water quality. The nearest water body is the Brule river, located more than ½ mile to the southeast. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS
The sale area can be viewed from Hazel Prairie road, a moderately traveled town road. Very little adverse impact is expected.

WILDLIFE
This area is used by game and non-game, birds and animals. This harvest will change use patterns very little. Similar habitats, both pre sale and post sale, are found in the vicinity.

ENDANGERED RESOURCES
The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a resu of this management activity. Bureau of Endanagered Resources staff will be consulted before offering this tract for sale.

RECREATION
Uses of this area include primarily hunting and wildlife viewing. Impact will be minimal.



Stnd	P_typ	P_sIz	P_dens	S_typ	S_sIz	S_dens	Acres
1	A	0105	3	BW	0105	1	119
2	A	0105	3	FG	0105		21
3	LB		0	GG			11
4	BW	0511	3	0	0511	1	67
5	OX	0105	2				11
6	A	0105	3	BW	0105	1	37

Brul

River State Forest--TRACT 6-04
Prison Pine Thinning
Land Management Area = Gordon Annex Forest Production Area (area 11)
Red Pine Plantation – 1943,1946,1971 origin
First and Second Thinnings--41 Acres

STAND DESCRIPTION
This thinning involves 3 separate stands of red pine. The easternmost portion (stand 1, origin 1943) of this sale area was thinned (for the second time) about 15 years ago. This is a red pine plantation that was planted on absolute perfect spacing when this area was part of a tree nursery. The stand 6 portion was planted in 1971 and has never been thinned. The stand 5 portion w planted in 1943 and includes a mixture of red pine, white pine, norway spruce, and white spruce. This area is very overstocked with trees as it has never been thinned. Most trees in this sta are over 75 feet tall and of very nice quality. Understory development in all three stands is very limited. Much of this proposed thinning is located directly adjacent to the Eau Claire river.

GOALS
This stand falls within the Gordon Annex forest production area management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are manage to provide renewable forest products. An aesthetic goal is to maintain a healthy mix of tree species within aesthetic areas along roads and river corridors.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION
These stands will be thinned by a combination of row removal and marked selective thinnings. Residual basal areas following this thinning will be between 90-150 square feet per acre. Harvesting may take place at any time of the year. BMP regulations will be followed with residual basal areas following the sale higher than 60 square feet per acre. Also, equipment opera will not take place within 50 feet of the waters edge unless it is on an already established road. Following the thinning, species diversity will increase as more sunlight is able to reach the fo floor. A considerable ground layer of vegetation will develop over time, and will allow for continued diameter growth on residual trees.

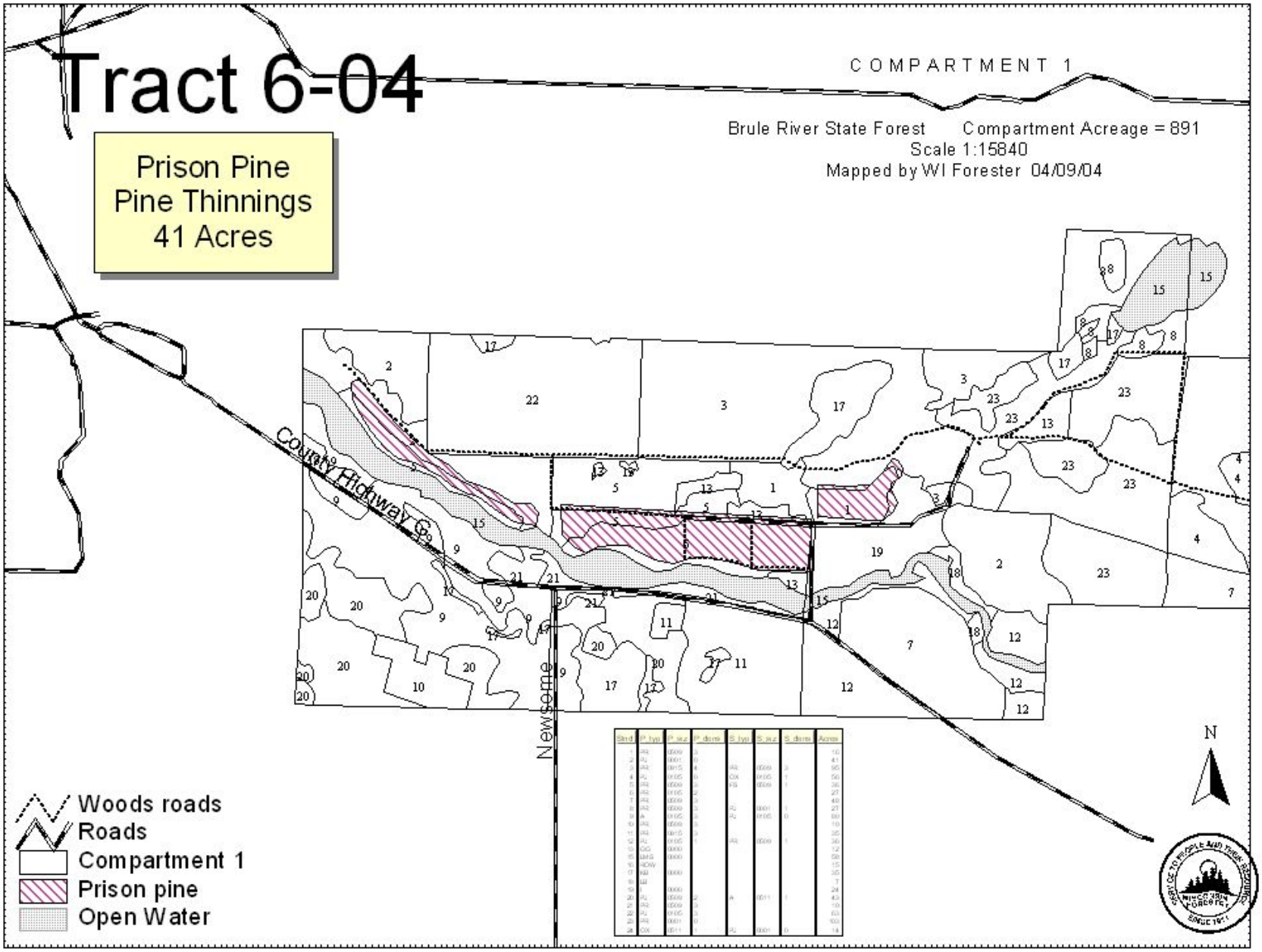
WATER QUALITY
The site is adjacent the Eau Claire river, but harvesting will not be on steep slopes. The site is flat to gently sloping sand. Minimum soill disruption will occur. All BMPs for water quality be followed. No negative impact is expected. Local DNR water quality staff has been consulted in a February 2004 meeting.

AESTHETICS
The short term aesthetic impact to river users will be minimal due the nature of a thinning. The long term effect will be larger diameter trees within site of the river.

WILDLIFE
This area is used by game and non-game, birds and animals. This thinning will change use patterns very little. Over time, understory plants will become more established, thereby improvin habitat for species that require ground cover. The local DNR wildlife manager has been consulted.

ENDANGERED RESOURCES
The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a resu of this management activity. Bureau of Endanagered Resources staff has been consulted.

RECREATION
Uses of this area is very limited due to it being adjacent to a prison facility. Very limited hunting occurs on the land and some fishing / boating is done on the Eau Claire river. Impacts will minimal.


Tract 6-04
COMPARTMENT 1
Brule River State Forest Compartment Acreage = 891
Scale 1:15840
Mapped by WI Forester 04/09/04
Prison Pine
Pine Thinnings
41 Acres
County Highway G
Newsome
N
Woods roads
Roads
Compartment 1
Prison pine
Open Water